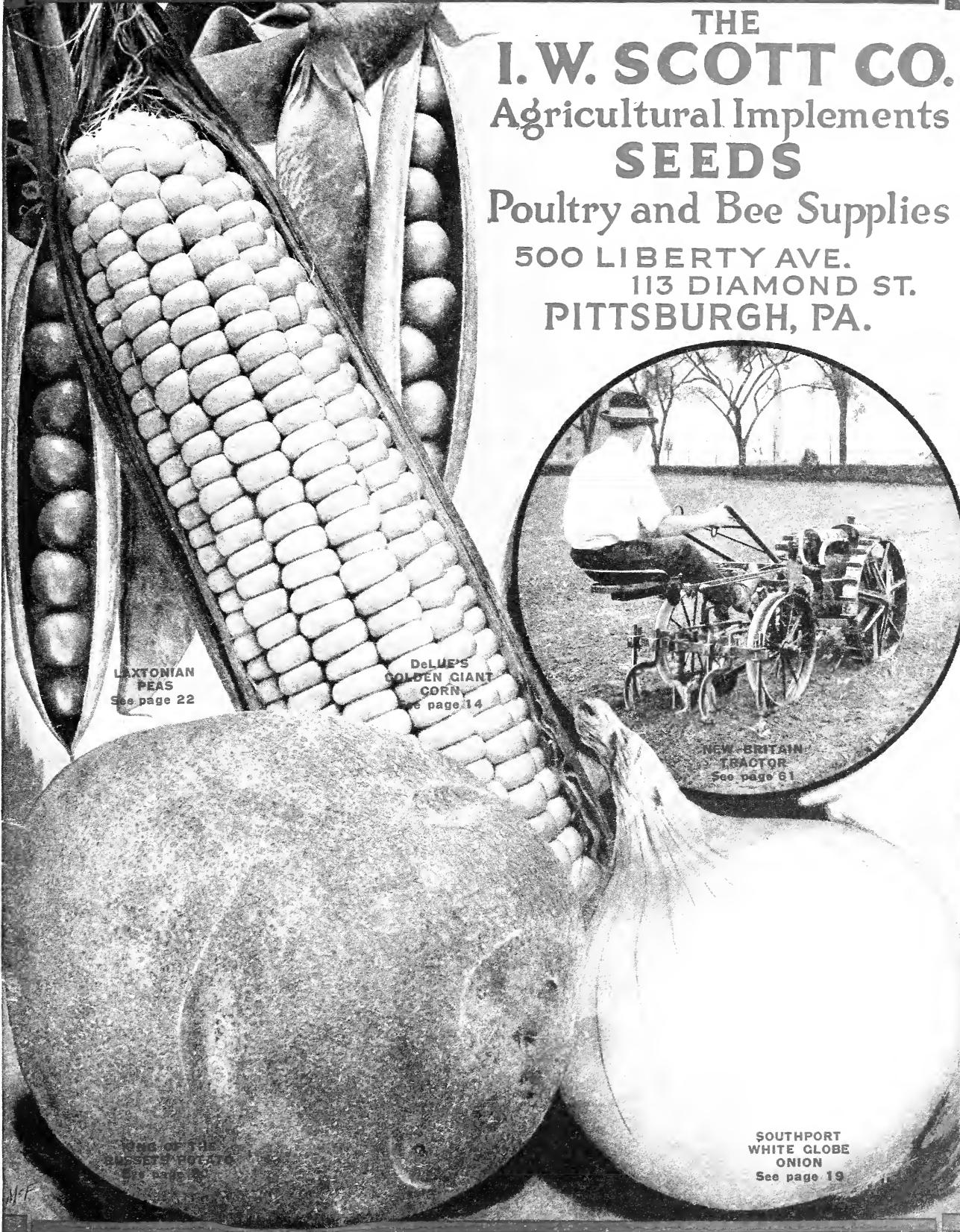


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THE
I. W. SCOTT CO.
Agricultural Implements
SEEDS
Poultry and Bee Supplies

500 LIBERTY AVE.
113 DIAMOND ST.
PITTSBURGH, PA.

LAXTONIAN
PEAS
See page 22

DeLUXE'S
GOLDEN GIANT
CORN
See page 14

NEW-BRITAIN
TRACTOR
See page 61

SOUTHPORT
WHITE GLOBE
ONION
See page 19

General Information and Suggestions

REDUCED PRICES

A comparison of the prices named in this catalogue with those of our 1921 issue will reveal the fact that there has been a very substantial reduction in the prices of all kinds of Agricultural Implements, Fertilizer and other Farm Supplies.

As the manufacturers have not only taken heavy losses on completed goods and raw materials purchased at the highest prices, but have based their prices for 1922 on the present cost of material and labor, we do not expect further reductions during the year. However, if such reductions should occur, our customers will receive the full benefit of prices in effect at the time the order is received.

CASH DISCOUNT

The prices named in this catalogue are our regular selling prices, f. o. b. cars Pittsburgh. However, on large orders consisting of a number of implements or large amounts of other goods we will quote special cash prices on receipt of specifications.

Our goods are handled by reliable dealers in nearly every section of Western Pennsylvania and can be purchased through them.

ORDER EARLY

Our rush season comes in the months of March and April. To relieve congestion and reduce to a minimum the delay in filling orders, we solicit the coöperation of our customers by placing their orders early, before the rush begins. While early ordering helps us, the customer is benefited even more.

REMITTANCES

Money should be sent by Money Order, Registered Letter, Bank Draft or Check. Amounts less than \$1 may be sent in postage stamps.

Write your Name, Post Office, State and Shipping Station plainly on every order. State whether you want the goods forwarded by parcel post, express, or freight.

When goods are shipped by freight or express to points where there is no agent, our responsibility ceases when we secure a receipt from transportation company.

Parcel Post Shipments

We deliver free, by parcel post, all Vegetable and Flower Seeds in packets, ounces, quarter-pounds and pounds. On Peas, Beans, Corn, Onion Sets, etc., in pints or quarts, the amount to be added for postage is given in connection with the prices. On half-pecks and pecks, postage must be added at the regular zone rates given in the parcel-post table below.

Except in a few instances we have named "Postpaid" prices on all other mailable articles. On the articles excepted, the postage may be determined from the Parcel Post table. Seeds, plants and bulbs weighing eight ounces or less, are subject to postage at the rate of one cent for each two ounces or fraction thereof, regardless of distance. Over eight ounces, pound and zone rates will apply.

All general merchandise weighing four ounces or less is subject to postage at the rate of one cent for each ounce or fraction thereof, regardless of distance. Over four ounces, pound and zone rates will apply.

WEIGHT	1st Zone		(.50 miles) 2d Zone Rate	(.50 miles) 3d Zone Rate	(.50 miles) 4th Zone Rate	(.50 miles) 5th Zone Rate
	Local Rate	(50 miles) Zone Rate				
1 lb....	\$0.05	\$0.05	\$0.05	\$0.06	\$0.07	\$0.08
2 lbs....	.06	.06	.06	.08	.11	.14
3 lbs....	.06	.07	.07	.10	.15	.20
4 lbs....	.07	.08	.08	.12	.19	.26
5 lbs....	.07	.09	.09	.14	.23	.32
6 lbs....	.08	.10	.10	.16	.27	.38
7 lbs....	.08	.11	.11	.18	.31	.44
8 lbs....	.09	.12	.12	.20	.35	.50
9 lbs....	.09	.13	.13	.22	.39	.56
10 lbs....	.10	.14	.14	.24	.43	.62
11 lbs....	.10	.15	.15	.26	.47	.68
12 lbs....	.11	.16	.16	.28	.51	.74
13 lbs....	.11	.17	.17	.30	.55	.80
14 lbs....	.12	.18	.18	.32	.59	.86
15 lbs....	.12	.19	.19	.34	.63	.92
16 lbs....	.13	.20	.20	.36	.67	.98
17 lbs....	.13	.21	.21	.38	.71	1.04
18 lbs....	.14	.22	.22	.40	.75	1.10
19 lbs....	.14	.23	.23	.42	.79	1.16
20 lbs....	.15	.24	.24	.44	.83	1.22
21 lbs....	.15	.25	.25			
22 lbs....	.16	.26	.26			
23 lbs....	.16	.27	.27			
24 lbs....	.17	.28	.28			
25 lbs....	.17	.29	.29			
26 lbs....	.18	.30	.30			
27 lbs....	.18	.31	.31			
28 lbs....	.19	.32	.32			
29 lbs....	.19	.33	.33			
30 lbs....	.20	.34	.34			
31 lbs....	.20	.35	.35			
32 lbs....	.21	.36	.36			
33 lbs....	.21	.37	.37			
34 lbs....	.22	.38	.38			
35 lbs....	.22	.39	.39			
36 lbs....	.23	.40	.40			
37 lbs....	.23	.41	.41			
38 lbs....	.24	.42	.42			
39 lbs....	.24	.43	.43			
40 lbs....	.25	.44	.44			
41 lbs....	.25	.45	.45			
42 lbs....	.26	.46	.46			
43 lbs....	.26	.47	.47			
44 lbs....	.27	.48	.48			
45 lbs....	.27	.49	.49			
50 lbs....	.30	.54	.54			
55 lbs....	.32	.59	.59			
60 lbs....	.35	.64	.64			
65 lbs....	.37	.69	.69			
70 lbs....	.40	.74	.74			

The maximum weight of parcels addressed for delivery in the First, Second and Third Zones is 70 pounds; beyond the Third Zone, 50 pounds.

Parcels can be insured as follows: Up to \$5, 3 cents; \$5 to \$25, 5 cents; \$25 to \$50, 10 cents; \$50 to \$100, 25 cents, which insures against loss or damage.

All goods shipped by Parcel Post are at purchaser's risk.

INDEX Will be Found on Third Cover Page of Catalogue.

THE I. W. SCOTT CO.



OUR SEED STORE

TO OUR FRIENDS AND CUSTOMERS

WE TAKE pleasure in handing you our 1922 catalogue. We come to you again with as reliable Seeds, Implements, and other Farm Supplies as it is possible to obtain.

Our IMPLEMENTS are all standard makes, tried and tested for the purposes intended before being placed on the market.

Our VEGETABLE AND FLOWER SEEDS are grown for us by the most reliable and experienced growers in Europe and America. Our customers will find them true to name and of high quality.

Our FIELD SEEDS are selected with special reference to their purity and germinating qualities. Our aim has always been to furnish pure seeds rather than to sell inferior seeds, at low prices.

Our POULTRY SUPPLY Department includes a full line of the latest improved requisites for poultry-raising and egg-production, including an unsurpassed line of poultry feeds.

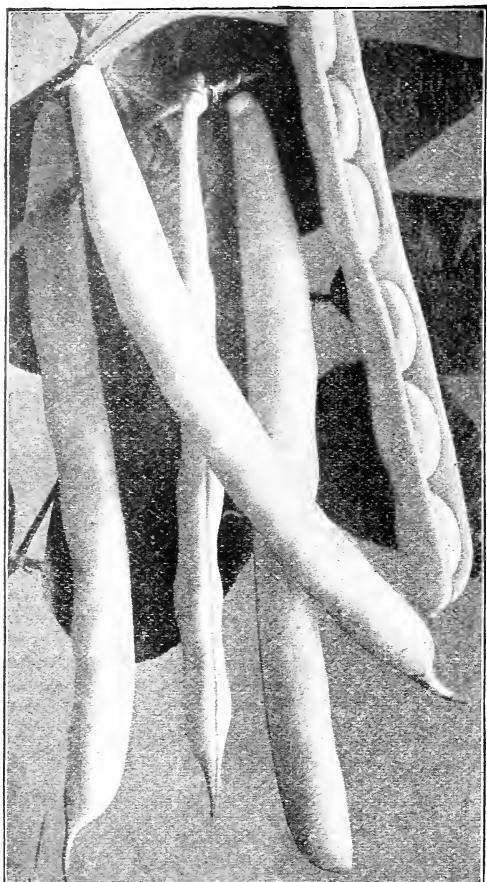
Our DAIRY SUPPLY Department includes almost everything necessary for the proper equipment of the modern Dairy.

Our NEW DEPARTMENT—BEE SUPPLIES. In response to numerous requests from our customers, we have added a Bee-Supply Department to our line. We carry in stock the leading products of the well-known manufacturers of Bee Supplies, The A. I. Root Co., of Medina, Ohio. A few of these articles will be found illustrated on pages 146 and 147. A complete catalogue will be sent on request.

We carry many lines of goods in stock that are not listed in this catalogue, and for this reason invite correspondence regarding the wants of our customers. If we cannot furnish the article inquired for we will endeavor to inform the inquirer where it can be had.

We wish to express to you our appreciation of the generous patronage of the past year, and, assuring you of our earnest desire to serve you, we are,

Very respectfully yours,



IMPROVED GOLDEN WAX BEANS

mildew than the green-podded sorts. One quart of seed will be required for 100 feet of furrow, and a bushel and a half to two bushels to the acre, when drilled in, depending on the variety.

IMPROVED GOLDEN WAX. The pods of this variety are a little longer and thicker than those of the original Golden Wax, running from 4 to 5 inches in length; the plant is an erect grower, hardy, and bears large quantities of good-quality Beans. A profitable Bean for the market-gardener, and for the home-gardener as well. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

GOLDEN-EYE WAX. A variety that for many years has been popular with market-growers. The plants come into bearing early in the season and produce a goodly quantity of semi-round, yellowish white pods. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

KEENEY'S RUSTLESS GOLDEN WAX. This sort is less liable to rust than any other variety of wax-podded Bean. The plants are remarkably vigorous and extremely productive. The pods are considered a great improvement over Golden Wax, and are meaty, well filled and stringless from the very first of the season to the last of the crop in the fall. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

PENCIL-POD BLACK WAX. One of the later sorts and is valuable for midseason use. Not generally considered a prolific variety, but with reasonable care will give bountiful crops. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

BUY YOUR SEEDS EARLY—in January or February, rather than in March and April, and have them on hand when planting-time comes.

AT THESE PRICES WE DO NOT PAY POSTAGE. IF WANTED BY MAIL, ADD 8 CTS. PER PINT, 10 CTS. PER QUART

DWARF GREEN-PODDED BUSH BEANS, continued

BOUNTIFUL. This variety is well named, both on account of its extreme productiveness and its earliness. One important feature is that while it comes into bearing early in the season the pods will remain in an edible condition for a long time. The pods are flat, absolutely stringless, tender and of excellent flavor. In a good many gardens it is the first Bean to come into bearing and if planted in succession will continue to bear until late in the fall. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.75, bus. \$10.

BLACK VALENTINE. This is an exceedingly early sort, and very similar to the Red-seeded Valentine, except that the pod is straighter and the Beans are black. Some growers do not consider it quite so good in quality as the Red Valentine, but in a market where there is a demand for the black-seeded Beans it will prove to be popular. It is a strong, vigorous grower, enormously productive, an excellent shipper and of very handsome appearance. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.75, bus. \$10.

FULL MEASURE. A desirable round-podded variety with pods 6 to 7 inches long, which are solid, meaty, brittle, and stringless. It is a little later than Stringless Green-Pod and is a splendid Bean for home or market use. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WHITE KIDNEY. Largely grown for shell Beans. The pods are showy and of good size, but are inclined to get tough unless picked when young. It has an advantage over some other sorts in that the Beans are white and do not discolor when cooked. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 50 cts., pk. \$3.25, bus. \$12.

RED KIDNEY. Mostly grown for shell Beans. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WHITE MARROWFAT. Good for cooking or baking; also an excellent shell Bean. Pod medium broad, green. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

DWARF HORTICULTURAL. A good sort for a green shell Bean. Pods are almost round, of medium length and slightly curved like some of the wax varieties. The Beans are round and speckled with red or purplish red. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

WHITE NAVY or PEA BEAN. This Bean is used mostly for field planting and is probably one of the best sorts for this purpose. The variety is considered to be a sure cropper and extremely prolific. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.50, bus. \$9.

DWARF WAX-PODDED BEANS

The Yellow-podded Wax Beans are handsomer in appearance than the green sorts, and on this account bring a higher price in a good many markets.

The plants are good yielders, but they seem to be more subject to rust or

ROUND-POD KIDNEY or BRITTLE WAX. Early, of exceptionally good quality, with a flavor superior to most other sorts, and is beautiful in appearance. The pods are round, long and very tender. It seems to be perfectly stringless at all stages of growth, and not liable to rust. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WARDWELL'S KIDNEY WAX. Probably this variety is known to gardeners all over the country, and is one of the hardiest sorts. The plants are rapid growers, coming into full size in a very short time; pods broad, waxy yellow, brittle and of fine flavor; seeds white with slight purple tinge. Most desirable in every way. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

DAVIS WHITE WAX. Compact in growth and very productive; the pods are clear waxy white, long and handsome. The dry Beans are clear white, tender, of fine flavor and are especially good for baking. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 50c., pk. \$3, bus. \$11.

IMPROVED PROLIFIC BLACK WAX. A good variety which should be planted in every garden. Pods are quite long, nearly round and well filled with small black seeds. Very tender and of excellent flavor. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

HODSON WAX. One of the handsomest Wax Beans, and a splendid sort for market, as it sells readily. The plants produce good crops and the variety is splendid for second-early or for main crop. The pods are long, very tender and of fine flavor. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

DWARF WAX-PODDED BUSH BEANS, continued

SURE-CROP STRINGLESS WAX. One of the best new extra-early varieties. Plants are strong growers and begin to produce pods when quite small. The pods are of extra-fine quality, semi-round and of a beautiful appearance. As its name implies, it is absolutely stringless. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

HARDY WAX. A very desirable medium-early variety. Rich yellow pods of medium length, round, entirely stringless, and of excellent quality. Produces a vigorous bush and seems to withstand adverse weather conditions better than any of the other wax-podded sorts. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

BUSH LIMA BEANS

Growing Bush Lima Beans in the Garden. The Limas are very tender and are susceptible to cold, wet ground and unpleasant weather. If Bush Lima Beans are planted in hills, the hills, should be 2 to 3 feet apart each way, with four to six Beans in a hill. If planted in drills, the rows should be 2 to 3 feet apart, and the Beans planted 3 to 4 inches apart and about 2 inches deep. Planting in hills on the above basis requires about twenty quarts of seed to the acre, and in drills thirty quarts to the acre.

BURPEE'S IMPROVED. The pods are large, well filled with Beans that come into marketing condition early in the season and remain green for a long time. The plant is an upright, compact grower, with very heavy foliage. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

FORDHOOK. Bear bigger crops than any other Lima, and are unusually early; in some cases they are ready for use three weeks earlier than the pole varieties. The pods are extra large and are well filled, containing three to five very large Beans. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

BURPEE'S. This Bean is of first quality and is among the best sorts for the average home-garden. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$14.

WOOD'S PROLIFIC. An improved strain of the old Dwarf Sieva Bean. It is harder than the true Limas, and is valuable for planting where true Limas do not succeed well. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$14.

POLE LIMA BEANS

The culture for Pole Lima Beans is practically the same as for the Bush Limas, excepting that poles 8 to 10 feet long must be used for the vines to climb.

EXTRA-EARLY JERSEY. Comes into marketable size ten days to two weeks earlier than the old Large White Lima. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

DETROIT MAMMOTH. A new variety introduced a few years ago. The mammoth pods are 9 to 11 inches long, medium green in color, and contain from five to seven Beans; excellent quality. Medium early, strong-growing vines and very productive. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

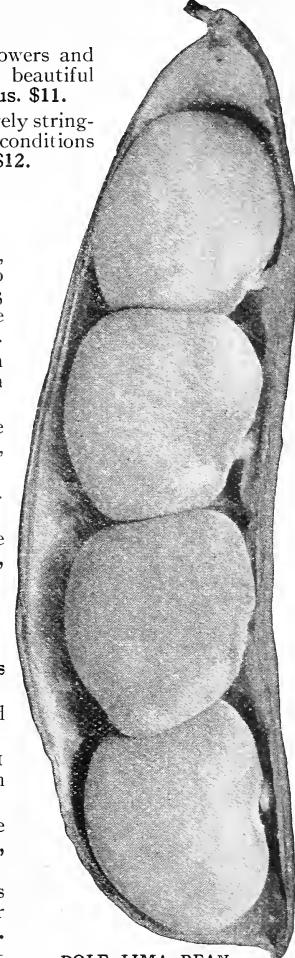
SEIBERT'S EARLY. Extra early. One of the most productive, and when freshly shelled the Beans are extra large, but shrink in drying to about the size of the ordinary White Lima. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

KING OF THE GARDEN. The largest of the Lima Beans and is extra fine in every way. The pods often measure from 5 to 6 inches in length and contain five or six perfectly formed Beans. It is never safe to allow more than two vines to each pole. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LEVIATHAN. Early; the vines are extra-strong growers and bear great quantities of large pods that are filled with good-sized, tender Beans. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

CARPINTERIA. This large, green-seeded variety produces extra-fine Beans which are of good size and much thicker than the ordinary Lima, with three to five Beans in the pod. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LARGE WHITE. This old sort is the standard by which all varieties of Lima Beans are measured. It has been grown in family gardens and by market-gardeners for many years. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.



POLE LIMA BEAN

WAX- AND GREEN-PODDED POLE or RUNNING BEANS

The Pole or Running Beans are tender and should be planted about two weeks later than Bush Beans. They succeed best in sandy loam which should be liberally enriched with manure. They are usually planted in hills 3 to 4 feet apart, with six to ten Beans in a hill and about 2 inches deep. However, when they are well started, they should be thinned to from four to six plants in a hill. They are sometimes planted with corn, using the stalks for a support. One quart of seed will plant from 100 to 200 hills and from eight to ten quarts will plant an acre, according to the size of the Bean.

KENTUCKY WONDER. It is about ten days earlier than most of the green sorts, being ready for use the first of August. Pods are entirely stringless, of good size, tender and excellent. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.75, bus. \$10.

KENTUCKY WONDER WAX. Practically identical with the Kentucky Wonder except that the pod is waxy yellow and flat. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LAZY WIFE. Pods are of good size, entirely stringless, fleshy, of pleasing flavor. Equally good as a snap Bean or a winter shell Bean. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

KING HORTICULTURAL. Similar to the old London Horticultural or Speckled Cranberry. Pods are short, broad, pale green, streaked with bright red. The Beans are extra good, either green or dry. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

BURGER'S GREEN-POD STRINGLESS. Also known as the White-seeded Kentucky Wonder. Bears long, brittle pods of fine flavor. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

SCARLET RUNNER. This variety is often used as an ornamental climber. It is a rapid grower, thickly covering a porch or trellis, and makes elegant shade in summer. The flowers are borne in good clusters, are brilliant scarlet and are followed by green pods that are sweet and tender. The dry Beans can be used in the same way as the Lima Beans. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

GOLDEN CLUSTER WAX. Long yellow pods, from three to six Beans in a pod, bearing from the middle of July until frost. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

BEETS

If the gardener wants Beets for early use, the seed should be sown just as early in the spring as it is possible to work the soil. If still earlier crops are desired, the seed may be sown in coldframe in February or March, and the little plants reset in the open ground in the early spring, this method often saving two or three weeks' time. The round or turnip-shaped Beets are considered best for general table use.

Growing Beets in the Garden. If the crop is desired for table use only, the seed may be sown in drills about 14 inches apart; after the plants are up they should be thinned so that they will stand 4 to 5 inches apart in the row. This will give ample space for the earlier Beets to develop, and when harvesting the crops, from time to time pull out alternate plants; thus the remaining plants will have more room to spread and become larger for winter use. Ordinary garden soil is entirely suitable for growing Beets, provided it is spaded and plowed quite deeply and the surface made mellow. The roots can be stored in a dry cellar, covered with sand to prevent shriveling or drying out, or they may be kept in pits out-of-doors.

EARLY MODEL. A very early blood-red sort; medium size, almost round, extremely sweet and tender. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.00.

CROSBY'S EXTRA-EARLY. A very superior variety. More globe-shaped than the old flat Egyptian. Nearly as early and of better quality. Good for either early or late planting. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EXTRA-EARLY EGYPTIAN. Very similar to Crosby's Extra-Early, but is a week or ten days earlier. The flesh is dark red, crisp and sweet. It is especially good for market-gardeners, and likewise for early use in the home-garden. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EXTRA-EARLY ECLIPSE. This is one of the most popular table Beets. The root is round, slightly pointed; flesh is bright red but not quite so dark as the Egyptian. If planted in June or July it makes a good sort for winter use. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

DEWING EARLY BLOOD TURNIP. This is a medium-early sort, with a smooth turnip-shaped root. It is especially good for storing for winter use, if the seed is sown the latter part of June or first of July. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EARLY BLOOD TURNIP. Round, with very small tap-root and grows to a good size in comparatively short time. The flesh is deep blood-red. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

DETROIT DARK RED. This variety is an improved strain of the old Blood Turnip. The flesh is dark red, somewhat like the Egyptian, but the root is almost a perfect globe shape. The outer skin is very smooth; the tops are of medium size. Market-gardeners consider it a valuable sort, but it is equally suitable for the home-garden. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CRIMSON GLOBE. A good-sized Beet that is popular for market use; matures early; is a good keeper, and has an excellent appearance. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

SWISS CHARD. This plant belongs to the Beet family, but the leaves only are used, prepared like spinach. The stems can be used in the same way as asparagus.

The leaves grow to a very large size, often 20 to 24 inches in length.

WHITE or SILVER SWISS CHARD. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

MANGEL-WURZEL

The Mangels are particularly valuable for the stockman and poultryman; the roots are juicy and sweet and are considered good for milch cows. Twenty-five to thirty tons of roots can be grown on an acre, which requires from five to six pounds of seed. The seed should be sown in April or May, and when the plants are 2 or 3 inches high, thin them out so that they will stand 5 to 6 inches apart. Should be harvested before frost and stored in pits out-of-doors, or in a dry, frost-proof cellar.

NORBITON GIANT, LONG RED. Very large; excellent variety for feeding stock. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.

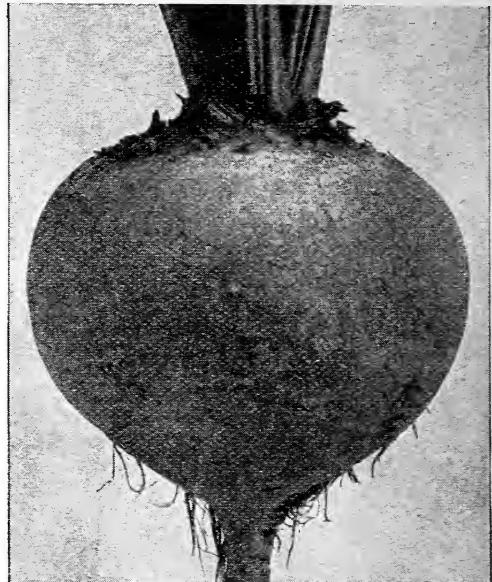
GOLDEN TANKARD. Particularly valuable on account of the sugar. The flesh and skin are deep yellow and the roots grow to an extremely large size. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.

LONG RED MAMMOTH. A good many stockmen consider this variety to be best of the Mangels. The roots grow to an enormous size and furnish a splendid quality of feed; all stock will eat the roots, but they are especially good for milch cows. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.

WHITE SUGAR. Probably the sweetest and best of all Sugar Beets; very productive and especially good for stock-feeding. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.

KLEIN WANZLEBEN. (Sugar Beet.) The roots are large and easily grown, with medium tops and white flesh. This variety, with careful culture, often yields twelve to sixteen tons per acre. One of the best of the Sugar Beets. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.

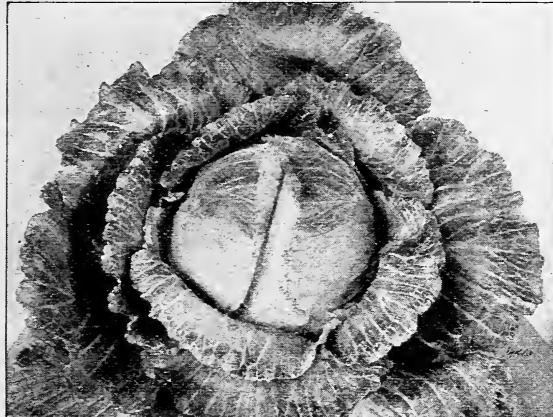
RED GLOBE. Flesh is light red or pink; keeps well for winter use and is probably the best Mangel for growing in shallow soils. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.



DETROIT DARK RED BEET



MANGEL-WURZEL



EARLY FLAT DUTCH



EARLY JERSEY WAKEFIELD

OUR FROST-PROOF CABBAGE PLANTS

Will Mature Heads Two to Three Weeks Earlier Than Your Home-Grown Plants and Double Your Profits

OUR GUARANTEE. We will refund the purchase price to any customer who is dissatisfied with results produced when crop is matured. A person wanting extra early Cabbage for home use or market CAN'T AFFORD NOT TO USE THESE PLANTS.

There are a number of islands along the seacoast of South Carolina where the soil and climatic conditions are just suited for growing tough, hardy Cabbage plants during the winter and early spring. The seed is planted in the open field during the months of October, November, December, January, and February. The plants make a slow but steady growth, until at eight to ten weeks of age they are very tough and hardy, the buds are purple and the outer leaves a reddish brown. When in this condition they can be shipped to territory farther north and be planted in the open ground a month to six weeks sooner than the home-grown hotbed or coldframe plants. These Frost-Proof Cabbage Plants will stand a temperature of 20 degrees above zero without injury, the land freezing, or the plants being covered with ice, sleet or snow after they are planted will not injure them.

The top of the plant does not grow until your regular spring weather opens up, but the roots grow from the time they are planted, and just as soon as spring weather starts, the estab-

lished root-growth assimilates the fertilizer in the soil, the plants grow very fast, maturing headed Cabbage two to three weeks sooner than you can mature them from hotbed and coldframe plants.

You know what the difference in profit will be if your crop is matured and marketed before the general crop from home-grown plants is matured, but to get this advantage these frost-proof cabbage plants must be planted a month or six weeks earlier than you would plant home-grown plants from hotbeds or coldframes.

Our Cabbage plants are grown from the best Long Island grown seed and are shipped direct from our growing station in South Carolina by parcel post or express. We can fill orders from December 1 to May 15.

The plants when received will be somewhat wilted and have a hard, stunted appearance, which will be disappointing to persons who have never used these plants before. Regardless of appearance, they will produce the crop results.

VARIETIES: EARLY JERSEY WAKEFIELD, CHARLESTON LARGE TYPE WAKEFIELD, SUCCESSION, and EARLY FLAT DUTCH

PRICES BY PARCEL POST, POSTAGE PAID.—In lots of 100, 200, 300, or 400 plants at 50 cts. per 100 plants; 500 plants for \$1.75; 1,000 or more at \$3.25 per 1,000 plants.

Orders are filled by the 100, not 250 or 350. These prices are for even quantities of one variety to package; if you ordered 200 of one variety and 300 of another variety you would pay at the 100 rate.

PRICES BY EXPRESS, BUYER PAYING EXPRESS CHARGES.—In lots of 1,000 to 4,000 plants at \$2.25 per 1,000; 5,000 or more at \$2 per 1,000. Plants are packed for express shipment, 1,000 or 2,000 plants of a variety to package. They weigh about 25 pounds per 1,000 plants, packed for shipment. For the past two years the express service has been congested and the deliveries slow and unsatisfactory. We therefore advise parcel post shipments.

Order Early to Get Plants Delivered in Time. When we receive your order for these plants, we have to forward it to our growing station which takes several days. Plants are shipped direct to you from growing station. Plants cannot be pulled or shipped when beds are wet. We sometimes have a week or ten days of continued wet weather which prevents shipment. If you do not receive your plants as soon as you expect them, you will know that weather prevents shipment. Send your orders two to three weeks before you expect to set the plants and you will get them on time.

CABBAGE

Growing Cabbage in the Garden. If extra-early Cabbage is desired, it is advisable to sow the seed in a hotbed in January or the first part of February. Plants raised in hotbeds must be hardened off by slightly lifting the sashes to give air on mild days. Plants may be set in the open ground as soon as danger of heavy frost is past—if the plants are properly hardened they will not be injured by slight freezing. Cabbage plants are gross feeders, and the soil should be made as rich as possible and likewise finely pulverized; set the plants about 20 inches apart, and make the rows far enough apart to admit of easy cultivating. Seed may be sown about the middle of April for the second crop, and for later crop sow early in May, transplanting to open ground in July. One ounce of seed will produce from 1,500 to 2,000 plants.

If the plants are infested with Cabbage-worms they may be dusted with Slug Shot, tobacco dust or some similar insecticide.

SELECT EARLY JERSEY WAKEFIELD. For a good many years this has been the leading early Cabbage. As a general thing, market-gardeners consider it the best of the early sorts. The heads are pointed and of fair size. The plants are hardy, standing heavier frost than any other early variety. The leaves are small, therefore permitting of close planting. Select Early Jersey Wakefield is an excellent keeper, solid enough to be shipped long distances, a valuable sort for the home-gardener as well as for the market-gardener. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

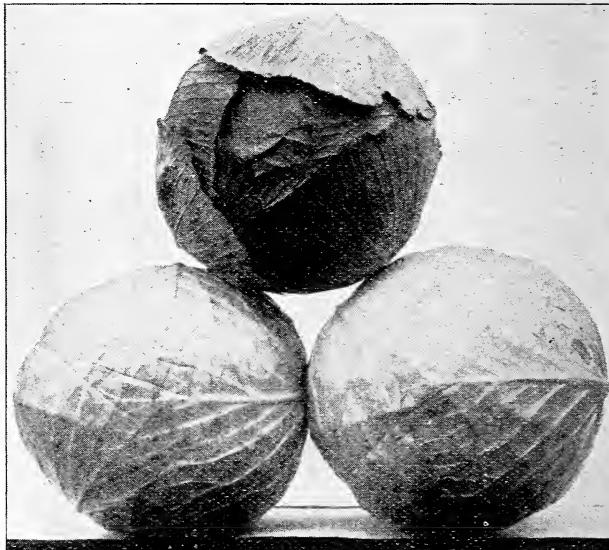
CHARLESTON LARGE WAKEFIELD. This is simply a selection from the Select Early Jersey Wakefield, but a little later, and grows a much larger head. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

EUREKA. A flat-headed Cabbage which comes into usable size with the Early Jersey Wakefield. The heads are solid, with tender leaves. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

GLORY OF ENKHUIZEN. This variety is a dwarf grower, with small leaves, permitting of close planting. Heads are ball-shaped, tender, fine-grained and of ideal size for marketing. Tested with the Early Jersey Wakefield it has proved to be five to ten days earlier, which is a great advantage to the man who grows for the market. It also has a finer flavor and is a better keeper than the Wakefields. Pkt. 5 cts., oz. 35 cts., 1/4lb. \$1, lb. \$3.

COPENHAGEN MARKET. This variety was introduced about ten years ago. The heads are round, and weigh from five to eight pounds each; they are extremely solid, have a very small core, and are of fine quality. It matures with the Wakefields. The plants are hardy, short-stemmed, and produce heads close to the ground. On account of its compact growth it can be planted closer than most other varieties. The finest round-headed early Cabbage on the market. Pkt. 10 cts., oz. 40 cts., 1/4lb. \$1.25, lb. \$4.

HENDERSON'S EARLY SUMMER. An old, well-known second-early Cabbage. The heads are flat, round and solid, and will weigh from seven to ten pounds each; is about ten days later than the Early Jersey Wakefield. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.



DANISH BALLHEAD (SHORT STEM) CABBAGE

BURPEE'S ALLHEAD. This variety was introduced something like twenty years ago. It is claimed to be "the earliest of all large Cabbages." The heads are flat and solid, having comparatively few outer leaves. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

BURPEE'S SUREHEAD. Another old standby. Heads have few loose leaves, are uniform in size, hard, and keep well. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

SUCCESSION. This is a second-early variety, and is highly recommended for garden planting, as it heads well under almost all conditions. About a week later than Early Summer, but nearly double the size. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

ALL SEASONS. An early drumhead Cabbage; very solid, nearly round heads that are slightly flattened. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

HOLLANDER, or DANISH BALLHEAD, SHORT STEM. The true Danish Ballhead Cabbage came from Denmark something like thirty-five years ago, and still holds the popularity that came to it during the first few years of growth for the American market. The heads are solid as a bullet, of medium size, white and tender clear to the center; no other Cabbage is so popular for market use as the Danish Ballhead, and a good price can be obtained for this variety when ordinary Cabbages are not salable at any price. The most popular and profitable late variety for market. A good keeper. Pkt. 10 cts., oz. 35 cts., 1/4lb. \$1, lb. \$3.

PREMIUM FLAT DUTCH. There is no better Cabbage for later winter use; it is a splendid keeper and the heads are of good size, solid and handsome. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.



COPENHAGEN MARKET CABBAGE

CABBAGE, continued

MAMMOTH ROCK RED. A good-sized, reliable - heading red Cabbage. Pkt. 5 cts., oz. 40 cts., 1/4lb. \$1.25, lb. \$4.50.

DANISH ROUND RED. This is a new introduction and probably is the best of the red Cabbages. The deep color extends clear to the center of the heads, which are perfectly round, very solid, and not liable to burst. Pkt. 10c., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

LARGE LATE DRUMHEAD.

Extra-good flat Cabbage for all purposes. Heads solid and big, and will keep until late in the spring. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

DRUMHEAD SAVOY. Savoy Cabbages have peculiarly crinkled leaves. This variety is probably the best of the Savoys. Plants are strong growers, with only a few outer leaves. The heads may be blanched without difficulty and are of the finest flavor. Savoy Cabbage is the favorite of many, and this variety is one of the best for the home garden. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

CHINESE or CELERY CABBAGE (Pe-Tsai)

Produces beautiful celery-like heads that bleach easily; also resembles Cos Lettuce. The outer leaves may be used while it is growing; fine to use as a salad or cooked like asparagus. The flavor is delicious. Sow seed about the last of June, plant in rows 24 inches apart, and thin to 20 inches apart in the row. Pkt. 10 cts., oz. 30 cts., 1/4lb. \$1, lb. \$3.50.

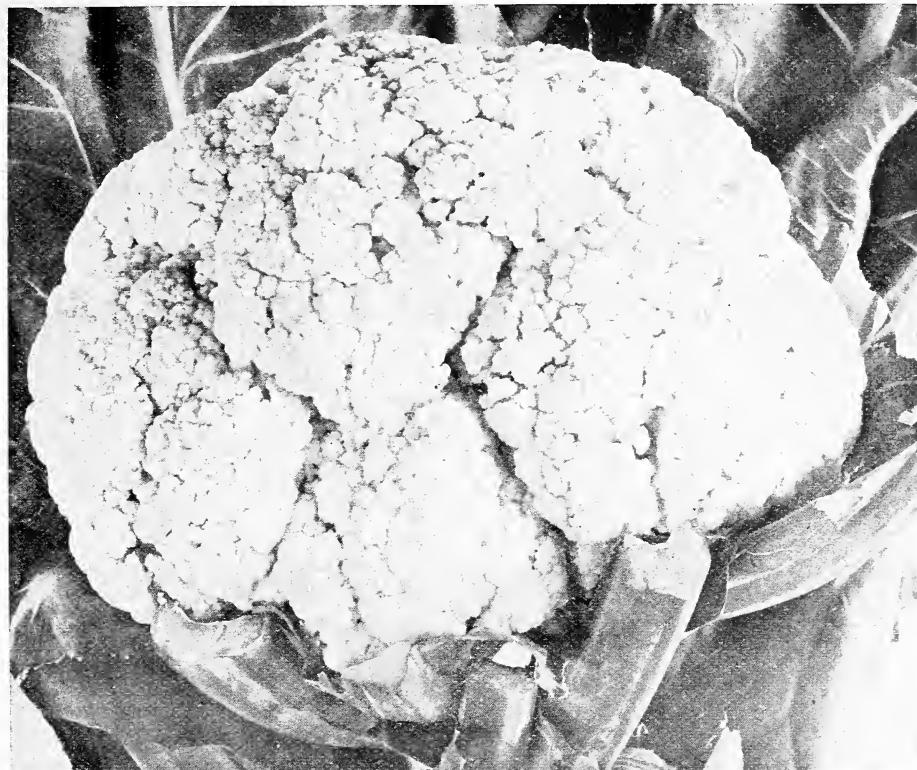
COLLARDS

GEORGIA or SOUTHERN. A popular variety with a long, green stem and large, loose leaves forming an open head. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

CAULIFLOWER

Growing Cauliflower in the Garden. Like most vegetables, Cauliflower thrives best in rich soil, with plenty of moisture. In dry weather it is advisable to water the plants freely, and especially so when the heads begin to form. The seed should be planted about the same time as cabbage seed and under the same general conditions, but it should be borne in mind that Cauliflower will not head in hot weather; therefore seed-sowing should be planned so that the heads will form in the spring and early summer or in the autumn. One ounce of seed will produce about 2,000 plants.

SELECT EARLY SNOWBALL. This is an extra-early variety, which is generally considered to be one of the sure-heading sorts. The habit is dwarf; the outer leaves are small, which permits the plants to be set very close, 18 to 20 inches giving ample space; the head is of medium size, pure snow-white. In addition to its value in the garden it can be grown under glass in the winter. It is a most valuable sort, both for the market-gardener and the home garden. We offer an unsurpassed strain from one of the leading growers in Denmark. Pkt. 40 cts., 1/4oz. 75 cts., oz. \$2.50, 1/4lb. \$8.



SELECT EARLY SNOWBALL CAULIFLOWER

CAULIFLOWER, continued

DANISH GIANT or DRY WEATHER. This variety is just a few days later than Snowball. The heads are about the same size, pure white, perfect and solid. The great advantage of this sort is that it will grow during dry weather when the other varieties are likely to fail to head during periods of extreme drought. Pkt. 40 cts., 1/4oz. 75 cts., oz. \$2.50, 1/4lb. \$8.

CORN SALAD

This is a hardy, quick-growing plant, and is often used as a substitute for lettuce during the winter months; also for cooking like spinach. The seed may be sown in the late fall; if the plants are given a slight protection in winter they will be suitable for use in early spring.

LARGE-SEEDED. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

CRESS

The common name of Cress is "Pepper Grass." The seed may be sown very early in spring in a sheltered spot in the garden, or may be started in the hotbed and the plants set out as early as possible. The plants mature very rapidly and soon produce seed, therefore it is necessary to sow every week or ten days, as the leaves are good only when the plants are small.

FINE-CURLED PEPPER. The foliage can be cut several times before the plants begin to form seeds. It is one of the best sorts of this class. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

WATER CRESS. (True.) Seeds of this variety should be sown in damp places; on the bank of a stream in shallow water is one of the best places for Water Cress. No care is required after sowing the seed. Pkt. 15 cts., oz. 50 cts., 1/4lb. \$1.75, lb. \$6.

CARROT

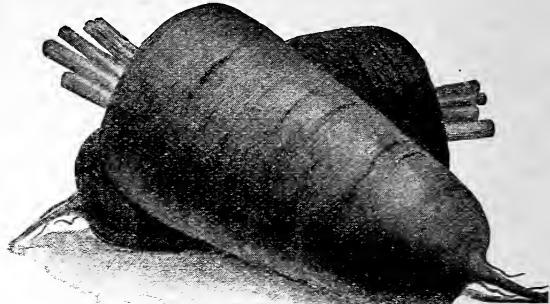
Carrots in the Garden. If an early crop is desired, the seed should be sown in warm, well-fertilized soil, from the first to the middle of April. For a later crop the seed can be sown about the first of June. Make drills about 14 inches apart, scatter the seed evenly in the drill and cover with about half an inch of soil. When the plants come up, pull them out so that they will stand not less than 3 inches apart. Fresh manure should never be used as a fertilizer for Carrots. An ounce of seed will sow about 100 feet of drill, and three to four pounds of seed are required for an acre.

EARLY SCARLET HORN, BLUNT ROOT. Tops are small, roots growing about 3 inches long. The color is reddish orange; flavor excellent; is one of the best summer sorts. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.

EARLY SCARLET HORN, POINTED ROOT. Like the preceding except that the root is a little longer and tapers down to a point. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.

DANVERS HALF-LONG. The roots of this variety taper to a blunt point. Color is dark orange; quality is exceptionally good and the root has but little core. It cooks very tender and is of fine flavor. The tops are of medium size and seem to be more finely cut than the average variety of Carrot. The roots make a good appearance when bunched, and therefore the variety is especially desirable for market. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.

IMPROVED LONG ORANGE. A selection from the old Long Orange. The roots are a little larger, deep red in color, thick and fleshy. It is a particularly profitable variety to grow as it is one of the most valuable Carrots for stock-feeding; also a valuable sort for market. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.



DANVERS HALF-LONG CARROTS

CHANTENAY. This is often called the Stump-rooted Carrot, and is one of the very earliest sorts. The color is orange-red; the top is broad and tapers to a rather blunt point. It is a variety which market-gardeners should plant for general crop. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.

ST. VALERY. This is usually planted for the main crop of Carrots, as the roots are symmetrical, tapering regularly from the top to the tip and are free from all side roots. It is a desirable sort for the home-garden as well as for market. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.

HALF-LONG LUC. Roots of this variety are from 4 to 5 inches long, inclined to be blunt and with comparatively slight taper. Has the usual orange-red color. Pkt. 5 cts., oz. 10 cts., 1/4lb. 35 cts., lb. \$1.

CHICORY

The roots of Chicory may be cooked and served in the same manner as turnips. When dried, the roots are often used to adulterate coffee. The leaves are very tender and succulent, and are often used as salad. Seed should be sown in the early spring and the plants thinned to about 6 inches in the rows. One ounce of seed will sow about 100 feet of drill.

LARGE-ROOTED. Pkt. 10 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

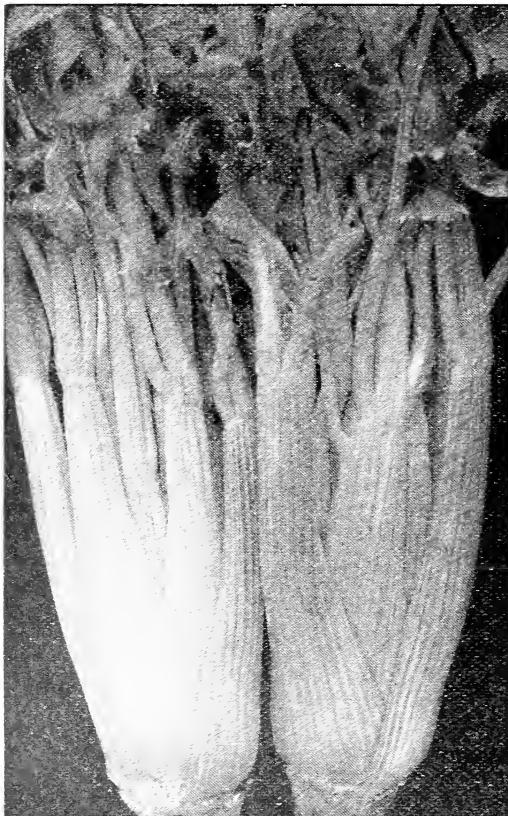
WITLOOF. Pkt. 10 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

CELERY

Celery in the Garden. If you grow Celery plants from seed you must be patient, for the seed is very slow in germinating. If early plants are wanted for the garden, the seed should be sown in a hotbed not later than the first of March, just barely covering the seed. After the little plants get 2 to 3 inches high they should be transplanted to a coldframe, setting them about an inch and a half apart. Keep the temperature in the coldframe at a moderate degree; when the weather is suitable, which usually is the latter part of May, set the plants in the open ground. For a field crop the seed may be sown in an open seed-bed. In this case the bed should be kept well watered and the top soil firmed by rolling or pressing. When the plants get up to the usual height, thin them out to 2 or 3 inches apart. When they get to be 4 to 5 inches high, it is a good plan to cut off the tops so as to make the plants stocky. The grower should plan to sow the seed and set the plants so that they may mature during the cool days of late May and June, rather than in the hot days of July. Do not hoe around the plants, nor permit any dirt to be thrown against them when they are wet with either dew or rain; it is likely to cause serious injury. One ounce of seed will give from 3,000 to 4,000 plants; one-half pound of seed usually is required for an acre.

GOLDEN SELF-BLANCHING. (French-grown Seed.) Considerable seed of this variety is grown in this country, but it does not produce as satisfactory plants as the French-grown seed; therefore we handle nothing but the imported stock. Golden Self-blanching is one of the very best Celeries for market use. The stalks are thick, crisp and brittle, and the heart is waxy yellow in color. Even the outer stalks are tender and free from stringiness. It blanches without difficulty, and we believe no other sort equals it for home or market. Pkt. 15c., oz. 75c., 1/4lb. \$2.25, lb. \$8.

GOLDEN SELF-BLANCHING. (American-grown Seed.) Pkt. 5 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.



GOLDEN SELF-BLANCHING CELERY



EASY-BLANCHING CELERY

them a dose of bordeaux-arsenate of lead. One ounce of seed will plant about fifty hills, and two pounds of seed will be required for an acre.

DAVIS PERFECT. Only one or two varieties of Cucumbers compare with Davis Perfect for general market use. This particular variety can be forced under glass for the winter markets, or grown outside during the summer. The fruits are long and slim. The color is rich, dark green, which retains until they are nearly ripe. They are tender and brittle and frequently are taken for "hothouse" Cucumbers. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

EARLY FRAME. "Short-Green" is another name for this variety. Fruits are straight but taper at both ends. Color is bright green. Pkt. 5 cts., oz. 15c., 1/4lb. 40c., lb. \$1.25.

LIVINGSTON'S EMERALD. This is an evergreen sort, almost spineless, which retains its color until almost ripe. The vines are vigorous and begin to set fruit when quite small. It makes an excellent small pickle, and when ripe is superior for sweet pickles. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

CELERY, continued

EASY-BLANCHING. The stalks are thick, almost round; foliage light green, blanching to quite a yellow tint. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

GIANT PASCAL. A selection from the Golden Self-blanching. The stalks are large and thick, very crisp, and have a fine flavor. A little earthing is required to blanch it for the best appearance; retains its freshness for some time after cutting. A good winter keeper. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

WHITE PLUME. Probably the easiest of the Celeries to grow in the garden. It comes into maturity early in September, and if hurried along can be had from the middle to the latter part of August. Pkt. 5c., oz. 20c., 1/4lb. 60c., lb. \$2.

PERFECTION HEARTWELL. This is a variety that has been on the market for a good many years and still holds its favor with gardeners. It is a late Celery of excellent flavor and can be kept well into the winter. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

WINTER QUEEN. Another late sort, with solid, thick stalks; can be kept late in the season. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

GOLDEN DWARF. Similar to the Golden Self-blanching, but the stalks do not grow so tall. The plant is just about as large and the stalks nearly as thick; the heart is solid and of good flavor. Pkt. 5c., oz. 20c., 1/4lb. 60c., lb. \$2.

PERFECTION WINTER. Of medium height, with a larger amount of heart than most other varieties; of fine quality and an excellent variety for late winter use. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

GIANT GOLDEN HEART. Rather tall, forming a large bunch and blanching white and crisp. Is hardy and a good shipper. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

CELERIAC, or TURNIP-ROOTED CELERY

The roots—not the top—are the edible portions of this plant. They are used chiefly for flavoring soups in place of celery or celery seed. May also be cooked or used as a salad.

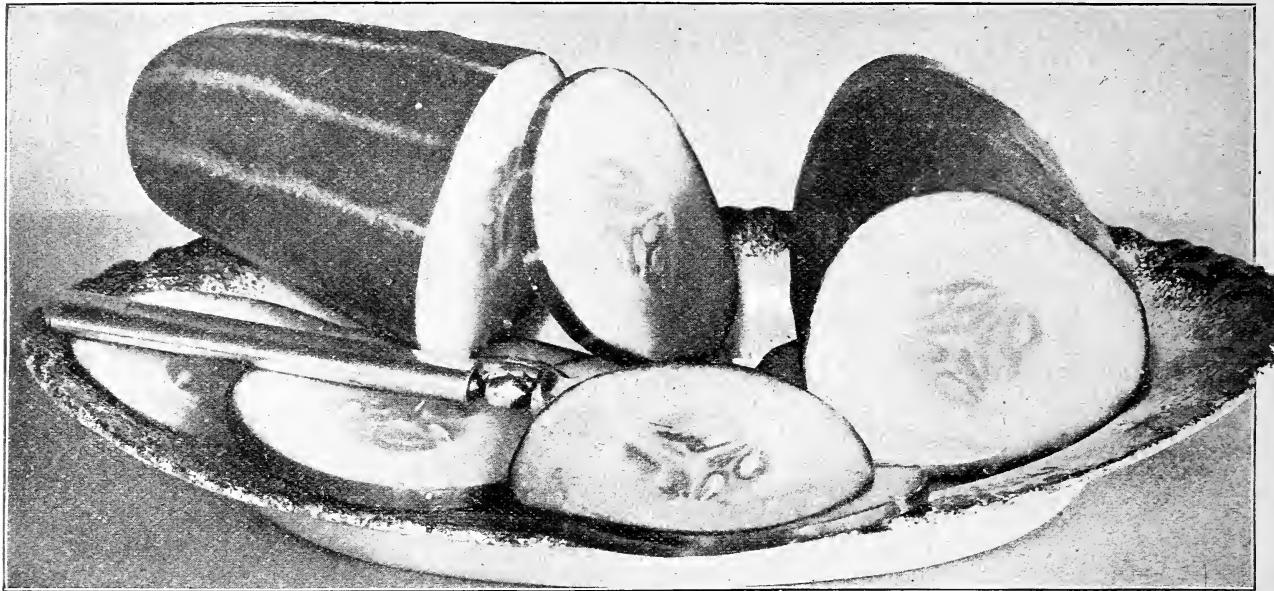
LARGE PRAGUE. A prolific variety for market-gardeners. The roots are large, round, smooth and free from side shoots. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

CUCUMBER

Cucumbers in the Garden. If you want extra-early Cucumbers, cut a few pieces of sod, turn the grass side down in the hotbed, and sow the seeds on top of the sod. If this is done the latter part of March or first of April the plants will be big enough to transplant to the open ground in the first warm days of spring. Paper pots and dirt bands may also be used in the hotbed in the same way as sod. For later use, hills may be made in the garden 4 to 6 feet apart each way, and the seed sown in the hill. When the plants come up, thin them out, leaving no more than four of the best plants in each hill for table use. The planting may be continued until the middle or latter part of July. For pickles, seed should be sown from June to the middle of July. The plants require a warm, rich, loamy soil, with a reasonable degree of moisture. The little fruits should be picked as soon as they are ready for use, otherwise the vines will cease to bear. If the Cucumber- or squash-beetles interfere with the development of the plants, give



DAVIS PERFECT CUCUMBER



IMPROVED EARLY WHITE SPINE CUCUMBER

CUCUMBERS continued

IMPROVED EARLY WHITE SPINE. This variety comes into bearing early and produces straight, light green Cucumbers that are crisp and tender. An exceptionally good sort for the home garden. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

ARLINGTON WHITE SPINE. Is another selection from the old White Spine Cucumber, but larger in size and not quite so early. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

BENNETT'S WHITE SPINE, IMPROVED. The originator spent several seasons in selecting and perfecting this variety. It comes into bearing early and produces fruit that is light green, mottled with pure white, with a few short spines. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EXTRA-LONG, or EVERGREEN WHITE SPINE. Another selection from the old type of White Spine, but the fruits are considerably longer than the other strains. The fruit is similar in shape, and the variety is used extensively for hothouse planting. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EARLY CLUSTER. The fruits are produced quite early in the season in clusters or masses. Well adapted for forcing or for open ground. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

GREEN PROLIFIC, or BOSTON PICKLE. Extra good for pickling, in fact, considered one of the best. Color dark green. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

WEST INDIA GHERKIN, or BUR. The Gherkins are used principally for pickles. This variety is rather small and round, and the fruit is produced freely on strong-growing vines. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$1.25.

LONG GREEN TURKEY. Vines are vigorous and productive; fruit very long, slender, firm and crisp. The small fruits are used principally for pickles. Pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 40c., lb. \$1.25.

COOL AND CRISP. A fine garden Cucumber, deep green and crisp. Is of the White Spine type, pure white when ripe. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

JAPANESE CLIMBING. It is necessary to grow this variety so that the vines can run over a trellis or be supported in some way. It is particularly valuable in a small garden. The Cucumbers are long, tender, and of fine flavor and borne very freely throughout the whole season. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

CUMBERLAND. This variety is also of the White Spine type. The fruits are thickly set with small spines, which almost cover the entire surface. The fruit is straight and practically the same size from end to end. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

FORDHOOK FAMOUS. The introducer claims this to be one of the largest and handsomest Cucumbers on the market. The vines are exceedingly vigorous and set fruits throughout the whole season. The skin is thin, bright green and does not turn yellow even in the fully matured fruits; flesh is thick, with few seeds, very crisp and fine-flavored. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EARLY FORTUNE. One of the very early varieties, producing an abundance of fruit of medium size and very high quality. A good variety for early table use. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25

EXTRA-LONG JERSEY PICKLING. A superior strain of the well-known Jersey Pickle. Produces longer fruit of dark green; vines are very vigorous and productive. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

KLONDIKE. A strain of the White Spine which differs from the parent in that the color is uniform dark green, which is retained much longer and is affected less by hot sun than in any other sort. It is especially valuable for southern planters but can be used profitably in the North. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

DANDELION

One would hardly think of giving up land to cultivate Dandelions, yet the cultivated plants are far superior to those that grow thickly in the lawn or over the fields. If the leaves are tied together, the center of the plant will blanch white and clear as endive. The seed-bed should be made fairly rich, and after the plants come up thin them out to about 1 foot apart. Have the soil freely cultivated and allow no weeds to grow. An ounce of seed will sow about 100 feet of drill.

IMPROVED FRENCH. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

SWEET CORN

Growing Corn in the Garden. Sweet or Sugar Corn is quite likely to rot if it is planted when the ground is cold or wet. We do not advise planting until about the middle of May, or possibly later, depending on the condition of the soil, which should be warm and dry. If the planter desires a continuous supply of Sweet Corn during the whole season, he should plant the seed every ten days or two weeks until about the first of July. Some of the extra-early varieties can be planted even the first week in July, and will mature a fairly good number of ears before the frost gets the plants. The old method is to plant Corn in hills, but some of the more modern gardeners do not "hill up" soil around the stalks in garden culture. If the hill method is used, they should be made about 2 by 3 feet apart for the early kinds, and about 3 by 3 feet for the later sorts. Keep the soil well cultivated and loose throughout the season. The loose soil helps to hold moisture in the ground, which is of great benefit to the growing plants. One quart of seed will plant from 200 to 300 hills; eight to ten quarts of seed will be required for an acre.

EARLY VARIETIES

GOLDEN BANTAM. This is a superb Corn for the home-garden. The ears are of medium size, tender and sweet, and come extremely early in the season. The cooked ears are a rich creamy yellow in color. Retains its rich flavor, sweetness, and tenderness longer than other varieties. In a market where customers will buy yellow Corn it is bound to be popular and profitable. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

BANTAM EVERGREEN. This is a very fine, large-eared, deep grained yellow Sweet Corn produced by crossing Golden Bantam and Stowell's Evergreen. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

EXTRA-EARLY CORY. (White Cob.) Large ears with small cob; is well filled to the tip and the butt; kernels very sweet. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

EXTRA-EARLY MINNESOTA. An earlier strain of the old Minnesota; desirable for market and private gardens. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

EARLY EVERGREEN. This variety is from ten to twelve days earlier than Stowell's Evergreen; the plant is not quite so tall as Stowell's, but it yields large ears, for an early Corn. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

EXTRA-EARLY ADAMS. Not usually considered as Sugar Corn. Used extensively for a first-early table Corn. $\frac{1}{2}$ pt. 10 cts., pt. 15 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

FORDHOOK. A very early, large-eared variety. A few days earlier than Cory. Eight-rowed ears, with small cob and deep grains. $\frac{1}{2}$ pt. 15c., pt. 20c., qt. 30c., pk. \$1.50, bus. \$5.

PEEP-O'-DAY. Unusually early and of superior flavor; can be planted successfully either early or late in the season. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

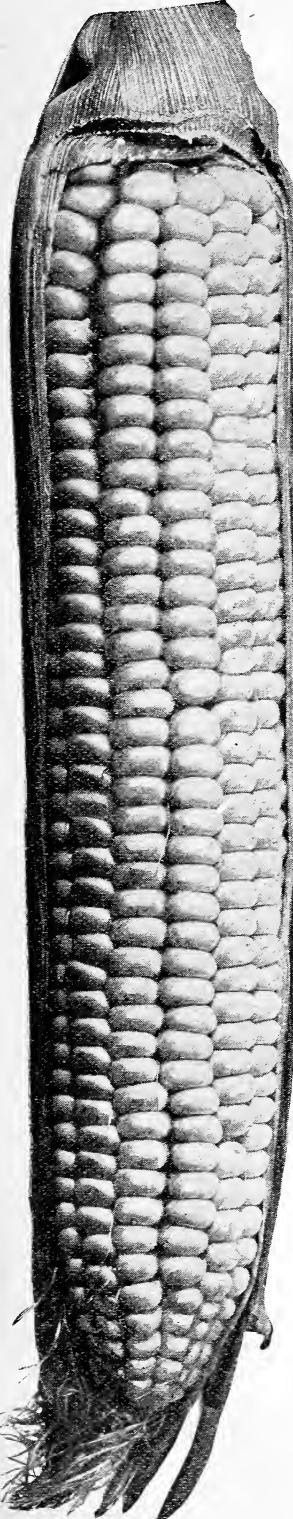
PREMO. One of the few really good extra-early sorts. The ears are large and reasonably sweet; profitable because of its earliness. $\frac{1}{2}$ pt. 15c., pt. 20c., qt. 30c., pk. \$1.50, bus. \$5.

KENDEL'S EARLY GIANT. A second-early variety, with ears from 6 to 8 inches in length; usually twelve-rowed; of good quality and very productive. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

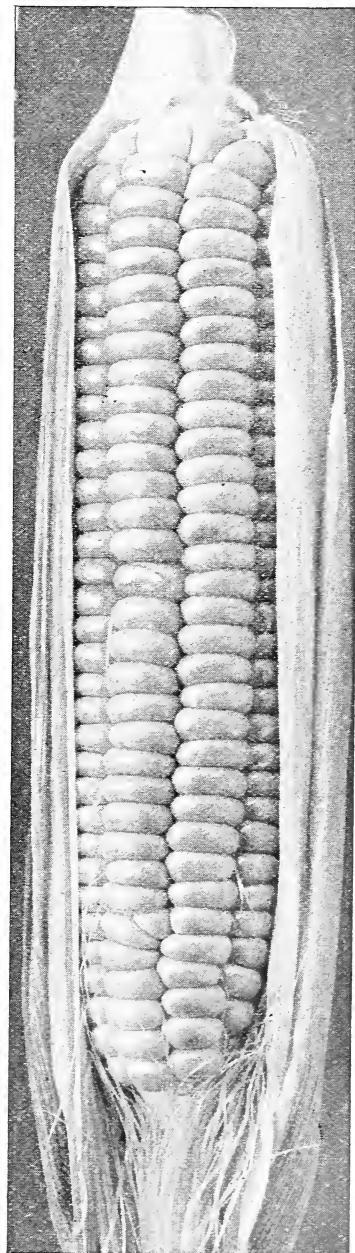
EARLY CHAMPION. Ready for use about the same time as Kendel's Early Giant. Ears about the same size, usually twelve-rowed; the grains are large, milky white, sweet and tender. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30c., pk. \$1.50, bus. \$5.

EARLY MAMMOTH. Probably the earliest and largest of the so-called mammoth varieties. Ears from 10 to 12 inches long. One of the best-known varieties. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

SHEDAKER'S CHOICE. A few days later than Adam's Early and ears much longer—from 12 to 14 inches. The ear is thick, with straight, uniform rows of grains. This Corn is slightly sweet, resembling Sugar Corn, and produces two and often three good ears to the stalk. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.75, bus. \$10.



SCOTT'S EARLY PERFECTION
SWEET CORN



GOLDEN BANTAM SWEET CORN

EARLY SWEET CORN, continued

De Lue's Golden Giant. After sixteen years' selection is now the sweetest, most tender, and juicy of all Sweet Corn. It is one to two weeks earlier than Golden Bantam and three times as large. It excels all other early varieties in size, productiveness, and quality and all the late varieties in quality and early maturity. It is the one Corn for the home or market-gardener who wants the greatest amount of highest quality Corn in the shortest period of time from the smallest piece of land. $\frac{1}{8}$ lb. 15 cts., $\frac{1}{4}$ lb. 25 cts., $\frac{1}{2}$ lb. 35 cts., lb. 50 cts., postpaid; 5 lbs. \$2, 10 lbs. \$3.50, 25 lbs. \$8, 50 lbs. \$15.

GOLDEN CREAM. A late addition to the Sugar Corn family, the original stock coming from California. Produced by crossing Golden Bantam on Country Gentleman. The ears are about the size of Golden Bantam; rich cream color when ready for the table, but turn to light golden yellow in cooking. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

COLUMBUS MARKET. May be considered the earliest of the second-early sorts. The ears are of good size, carrying sixteen rows of deep white kernels. Second to none in tenderness and flavor; especially adapted for early trucking. $\frac{1}{2}$ pt. 15c., pt. 20c., qt. 35c., pk. \$1.75, bus. \$6.

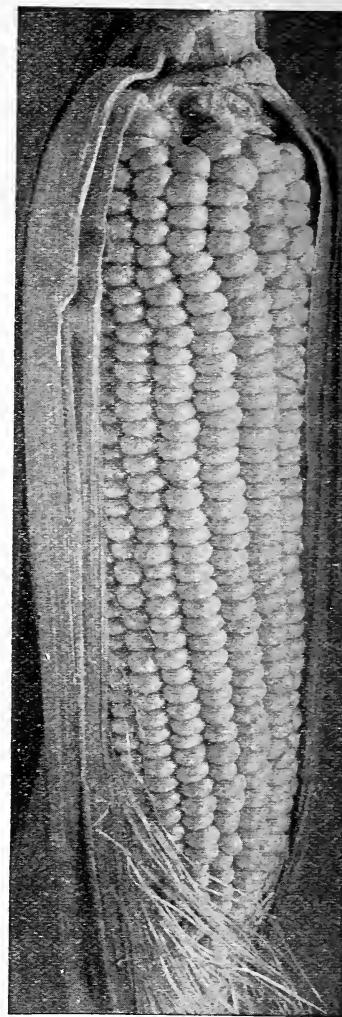
POCAHONTAS. The introducer claims this to be the earliest of the Sweet Corns. It was originated by a truck-gardener near New York City. The ears are of medium size and usually are filled from the butt to the tip with good-sized grains. May be planted earlier than many other varieties of Sweet Corn. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

SCOTT'S EARLY PERFECTION. We introduced this variety about twelve years ago, and it has been tested thoroughly by market-gardeners and in the home-garden; it matures very early and each year it has become more and more popular. The quality is superior and its productiveness makes it a profitable sort for market-gardeners. As a general rule the ears are ready for use within five or six days after the extra-early sorts. The ears run from 6 to 10 inches in length, with ten or twelve rows of kernels. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

HOWLING MOB. A second-early Corn of delicious flavor. This variety is planted extensively in the neighborhood of Pittsburgh; the gardeners claim it is superior to most sorts and sells readily on the market. It has a very large ear for an early variety. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

EARLY MAYFLOWER. One of the very earliest of the white Sugar Corns, maturing about a week earlier than the Cory varieties. Ears run from 6 to 7 inches long, with eight or ten rows. There are frequently two ears to the stalk. Quality fine. $\frac{1}{2}$ pt. 15c., pt. 20c., qt. 35c., pk. \$2, bus. \$7.

BLACK MEXICAN. Probably the sweetest of all the Sweet Corns. The ear is mottled with black and white grains, the darker grains becoming a violet shade when cooked. A splendid sort for the home garden, but on account of the color does not have large sale in the markets. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.



STOWELL'S EVERGREEN SWEET CORN

MEDIUM AND LATE VARIETIES

STOWELL'S EVERGREEN. This is an old sort, but still holds its place at the top of the list of late varieties. The ears are very large, from 8 to 10 inches long, with fourteen to twenty rows of kernels, which are unexcelled in sweetness. It is a superior variety for the market-gardener and for the home-garden. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

COUNTRY GENTLEMAN. The grains are set irregularly on the cob, which gives it a peculiar appearance and identifies the variety at all stages of its growth. The ears are medium in size and extremely sweet and palatable. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 35 cts., pk. \$1.75, bus. \$6.

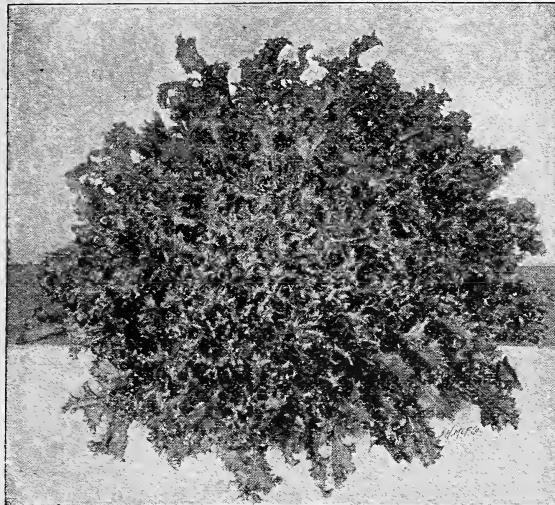
ZIG-ZAG EVERGREEN. Ripens a few days earlier than Stowell's Evergreen and seems to be equally good in quality. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

WHITE EVERGREEN. The stalks are vigorous, often 7 feet in height. The ears usually contain sixteen rows of deep white grains. Matures a few days earlier than Stowell's Evergreen. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

LATE MAMMOTH. Very large ears, with fourteen to eighteen rows of sweet and tender kernels. Valuable as a succession. $\frac{1}{2}$ pt. 15 cts., pt. 20 cts., qt. 30 cts., pk. \$1.50, bus. \$5.

POP-CORN

WHITE RICE. The most popular sort for general use. Prices on the ear, lb. 15 cts., 2 lbs. 25 cts. If wanted by mail, add 8 cts. for one pound, 12 cts. for three pounds.



GREEN CURLED ENDIVE

be sown in hotbeds in March or early April. The seed can also be sown in flats and kept in a light room where the temperature will average about 75 degrees. When the first two leaves are formed, the plants should be lifted from the flats and reset in beds with 3 or 4 inches of space between the plants. Keep the temperature uniform by shading from the direct sun, likewise keep the ground moist. When the weather is warm, and danger of cold nights or late spring frosts past, the plants may be exposed to the open air and gradually hardened off. Transplant the latter part of May or the first of June. Set the plants about 2½ feet each way, and when about 1 foot high draw the soil up around the stem to support the plant. One ounce of seed will produce 1,000 plants.

NEW YORK IMPROVED PURPLE SPINELESS. Plants bear from six to eight large, round, dark purple fruits, absolutely free from spines. Pkt. 5 cts., oz. 40 cts., ¼lb. \$1.50, lb. \$5.

BLACK BEAUTY. Under normal conditions this variety is from a week to ten days earlier than the purple sort. The fruit is entirely free from spines, of extra-large size, in color rich purplish black, and one of the most attractive sorts in the market; the quality is exceedingly fine. Pkt. 5 cts., oz. 40 cts., ¼lb. \$1.50, lb. \$5.

HORSE-RADISH ROOTS, Maliner Kren

A new variety superior to the old common kind. 40c. per doz., \$2 per 100, \$12 per 1,000.

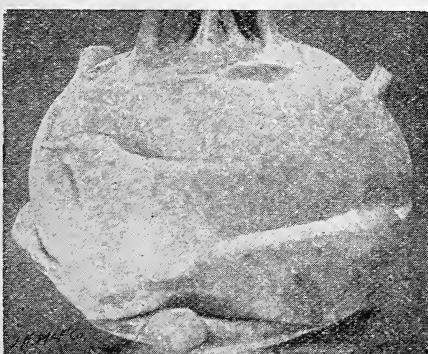
KALE

This vegetable is also known as Borecole. For early use, sow the seed in September and protect the plants during the winter. Seed may be sown from the middle of April to the first of May for spring use, and the plants transplanted and cultivated in the same way as cabbage is cared for. An ounce of seed will sow from 200 to 300 feet of drill; four pounds for an acre.

DWARF CURLED SCOTCH. One of the best for winter use and will stand extremely low temperature without protection. Pkt. 5 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.

TALL CURLED SCOTCH. Very similar to Dwarf Scotch except in size of the plant. Grows 24 to 30 inches high. Pkt. 5 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.

SIBERIAN. An excellent plant for spring greens. Pkt. 5 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.



WHITE VIENNA KOHLRABI

ENDIVE

Endive is used as a salad plant in autumn and winter. The seed may be sown in spring, or even in midsummer, in shallow drills which are about 15 inches apart; when the plants come up, thin them out so that they will stand about 12 inches apart in the row. A short time before the plants are wanted for use, tie the outer leaves to center of plant so the heart will blanch. Two ounces will sow about 300 feet of row; three pounds of seed will be required for an acre.

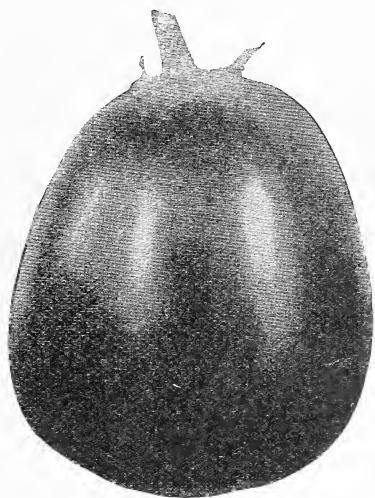
GREEN CURLED. The leaves are finely cut, dark green in color, and easily blanched to a clear white. Probably this is the hardest variety. Pkt. 5 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.50.

WHITE CURLED. Foliage is finer than the Green Curled, but similar in color and in general characteristics. Pkt. 5 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.50.

BROAD-LEAVED. The leaves of this variety are broad, light green in color and with a comparatively smooth edge. Pkt. 5 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.50.

EGGPLANT

Eggplant is a tropical vegetable, and is more at home in South America than in other parts of the western continent. It requires considerable heat, especially when the plants are small; therefore, the seed must



NEW YORK IMPROVED EGGPLANT

DWARF GERMAN. The leaves are yellowish green and beautifully curled; fine for garnishing. Pkt. 5 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.

KOHLRABI (Sometimes called the Turnip-Rooted Cabbage)

Should be used when it is half-grown, as when it is full grown it is tough and fibrous. For spring plants, sow the seed in the hotbed and transplant and cultivate the same as for cabbage. For winter use, sow the seed outdoors from June 15 to July 15; thin out to stand 8 inches apart. An ounce of seed will sow about 250 feet of drill.

WHITE VIENNA. This is one of the earliest sorts on the market. The top is very short and the bulb forms quickly after the plant comes up. The flesh is white, tender and desirable in every way. Pkt. 5 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

EARLY LARGE PURPLE. This is another early variety that can be used for early planting out-of-doors, or forced in the house. The bulbs are of medium size, with purple skin and white flesh. Pkt. 5 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

LARGE GREEN, or WHITE. This variety is generally used for stock-feeding, but if cut when small the bulbs are satisfactory for table use; as they get older they are inclined to be tough and stringy. Pkt. 5 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

LETTUCE

Lettuce in the Garden. For extra-early use in the spring Lettuce may be sown in the seed-bed in September or October and protected through the winter in coldframes. It is also possible to secure early plants by sowing seed in the hotbed from January to March. If one cares to take the trouble, plants may be secured by sowing the seed in flats and setting the boxes at a sunny window in the house. Whether the seed is sown in the hotbed or in the open garden, the soil should be made as mellow and fine as possible; mark off rows from 2 to 4 inches apart, and sow the seed thinly in these trenches, covering with about a quarter of an inch of soil. When the plants come up they may be thinned out or carefully lifted and transplanted into rows, leaving about 12 inches each way between the plants; this is the method by which the large heads are secured for market. Seed may be sown until well into July, the late sowing producing plants of marketable size in the fall. An ounce of seed will produce about 3,000 plants, or about 150 feet of drill; four pounds of seed will be required to sow an acre.

GRAND RAPIDS. This is especially adapted for greenhouse cultivation for the winter markets. It is, likewise, a good variety for sowing in the early spring. It does not form a solid head like many other varieties, but throws up large, compact bunches of crinkly leaves. It is a rapid grower, keeps in good condition for a long time, and, therefore, is one of the best sorts for shipping. Pkt. 5 cts., oz. 15 cts., 1/4lb. 45 cts., lb. \$1.25.

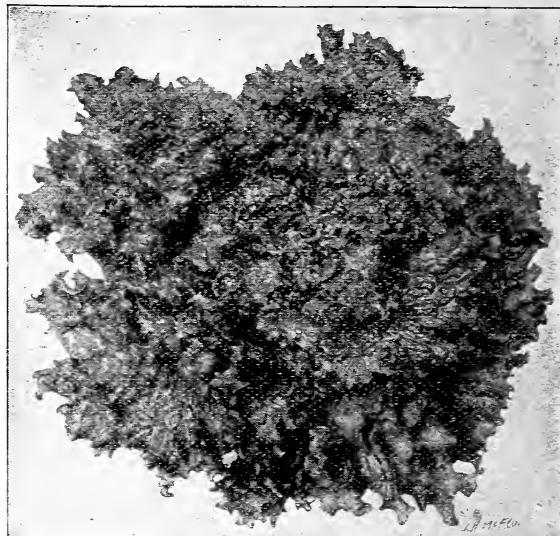
EARLY CURLED SIMPSON, WHITE-SEEDED. Somewhat like the Grand Rapids, in that it does not form a head. The leaves are yellowish green, crinkled and curled. Splendid for growing in a coldframe for early use. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

BLACK-SEEDED SIMPSON. Especially a Lettuce for the market-gardener, although it is largely grown for home use. It forms a loose head, while the curled leaves are nearly white, large, thin, crisp and tender. The variety stands the heat of summer better than some other sorts, therefore it is excellent for late sowing. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

GOLDEN CURLED. A very fine, half-head variety, with golden fluted leaves. Stands up well in hot weather and slow to run to seed. Very showy and a good cutting sort. Pkt. 5 cts., oz. 15 cts., 1/4lb. 45 cts., lb. \$1.25.

LARGE SUMMER CABBAGE. You can grow this variety all summer long and be sure of solid, crisp heads of light green Lettuce. Generally considered one of the best of the summer varieties. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

IMPROVED HANSON. Another summer variety, with outer leaves of bright green, while the center leaves, or the heart, are yellow-white as though they had been blanched. A great advantage is that it does not quickly run to seed, and the leaves retain their crispness and freedom from bitter taste until the plants are well grown. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.



GRAND RAPIDS LETTUCE

THE MORSE. A large, loose, bunching variety, forming a large bunch of leaves. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

BIG BOSTON, WHITE-SEEDED. This tops the list of head Lettuce for marketing, and in the South is grown to the practical exclusion of all other heading varieties. It does particularly well during the fall and spring months. The color is light green, the leaves are broad, thin, grow compactly, making a comparatively solid head. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

BIG BOSTON BLACK-SEEDED. Similar to Big Boston White-seeded, but grows a larger and more solid head. Especially adapted to indoor culture. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

BROWN CHARTIERS. A half-head variety similar to Golden Curled, except that the edges of the leaves are of a bronze color. Very crisp and tender. Not recommended for greenhouse or hotbed culture. Pkt. 5 cts., oz. 15 cts., 1/4lb. 45 cts., lb. \$1.25.

MAMMOTH BLACK-SEEDED BUTTER. Exclusively used for outdoor culture and also for growing in coldframes for early spring use. The leaves are smooth, brittle and quite thick. Stands a long time without going to seed. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

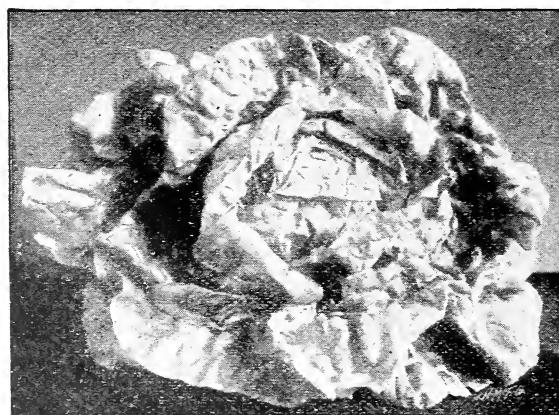
MAY KING. One of the later introductions, with medium-sized solid head, outer leaves light green in color, with the center leaves rich golden yellow. The plants grow rapidly and do not seem to be affected by cold or wet weather. It is an ideal sort for outdoor planting. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

CRISP AS ICE. A cabbage Lettuce, with heads of large size that have a rich, creamy yellow heart. The outer leaves are dark bronzy green, handsomely crimped and curled. Pkt. 5 cts., oz. 15 cts., 1/4lb. 45 cts., lb. \$1.25.

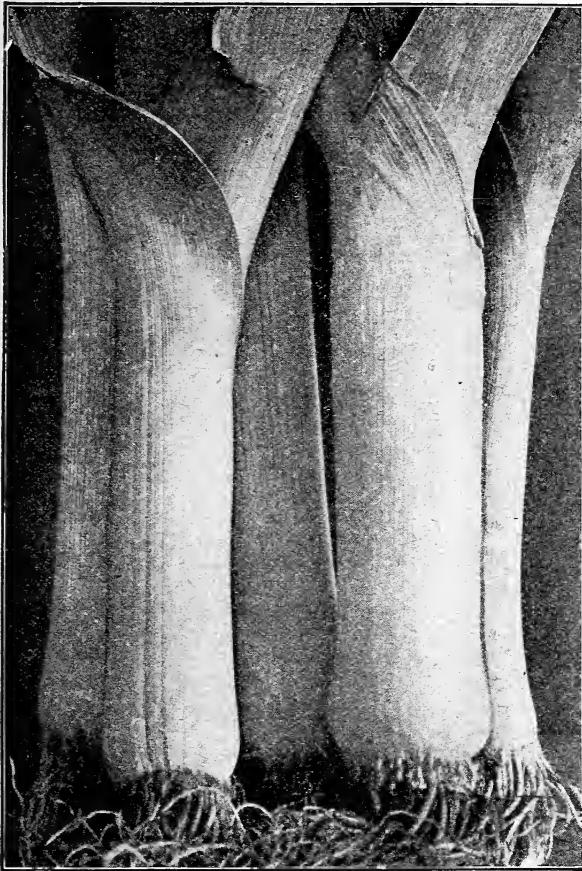
COS or ROMAINE, WHITE PARIS. Distinguished by the upright compact growth of the leaves. The heart can be made extremely tender by tying the outer leaves at the top, thus permitting the center to blanch. It is especially an outdoor Lettuce. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

NEW YORK, or WONDERFUL. A splendid large-heading and long-keeping variety, sweet, tender, and crisp. Perfect heads. Pkt. 5 cts., oz. 15 cts., 1/4lb. 50 cts., lb. \$1.50.

ICEBERG. A large-heading variety of Lettuce which is crisp and brittle; color bright green, lightly tinged with brown on top of the head; leaves curled on the edges. Pkt. 5 cts., oz. 15 cts., 1/4lb. 45 cts., lb. \$1.25.



MAY KING LETTUCE



LARGE LONDON LEEK

SWEETHEART. An exceptionally early variety, and one of the most desirable of melons. Of fine size and shape, the outer skin is mottled with light and dark green; the flesh is a bright red, firm and solid, with comparatively few seeds. The melons can be kept for some time after ripening without impairing their quality; this makes it a good shipping sort and profitable for the gardener. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

KLECKLEY SWEETS. A melon that is almost as sweet as honey, and particularly valuable for the home garden or for nearby markets. It does not carry for a long distance on account of the thin skin. Melons are about 20 inches long, with thin rind, bright scarlet, solid flesh; the flavor is superb. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

TOM WATSON. The best of the long varieties for shipping long distances; often exceeds 24 inches in length and 12 inches in diameter. Dark, mottled green rind which is thin but strong. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

CITRON

Citron is used only for preserving, and is usually purchased from the stores in a candied or dried form. There isn't any reason why it should not be grown in any garden, as the cultivation is practically the same as for the watermelon. More than this, if you grow it in a garden you will know just what you are getting and be absolutely sure that the fruit is fresh and good.

RED-SEEDED. Flesh is firm and solid, with comparatively few seeds. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

GREEN-SEEDED. Also called Colorado Preserving. Oblong and very large. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

LEEK

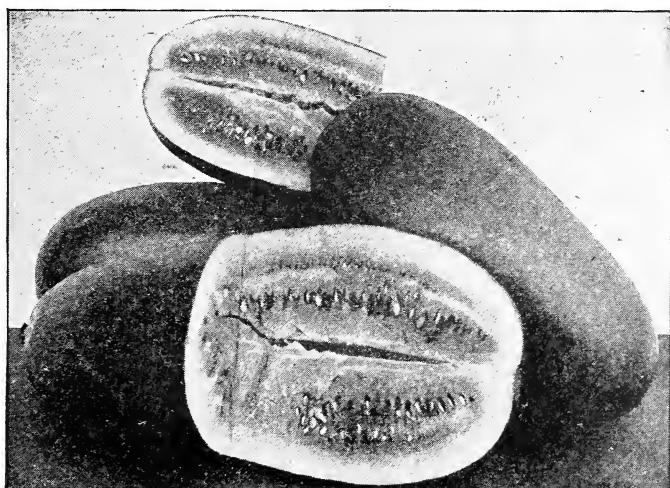
This vegetable is a relative of the onion family, and in all probability the original plants came from the region of the Mediterranean. Leek is cultivated principally for the leaves and leaf-stalks; the roots are of little value. The whole plant possesses a strong, pungent odor, and the principal use is for flavoring soups and stews, and it is a favorite vegetable among a large class of our people. The seed should be sown in a light soil, and when the plants are from 5 to 6 inches high, transplant so that they may stand about 6 to 8 inches apart. At the time of transplanting it is a good plan to cut back the plants one-half or one-third of their height. Two ounces of seed will sow about 300 feet of drill; four pounds of seed will give sufficient plants for an acre.

LARGE LONDON FLAG. Probably the hardiest of the Leek family. The leaves are usually broad and of good quality. In flavor it is one of the strongest. Popular for all market purposes as well as for the home garden. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

MUSSELBURG. Commonly called Carentan. This is not so strong in odor or flavor as some of the other varieties. It is, however, hardy and produces large leaf-stalks. It is one of the most profitable to grow, as it always brings good prices in market. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

WATERMELON

Melons in the Garden. Gardeners usually think that Watermelons should be raised in a light, sandy soil. This is not altogether correct, for good melons can be raised in a heavy soil, provided it is well fertilized and supplied with humus. There is no use in planting seed until the ground is warm, for if planted when the ground is cold and wet the seed will not germinate. Make the hills from 8 to 10 feet apart each way, adding to the soil a shovelful of well-rotted manure or a little commercial fertilizer. Ten to a dozen seeds may be dropped in each hill, and after the plants are up and sufficiently large to resist the attacks of insects, pull out all but three or four of the strongest plants. If the yellow-back beetle becomes so numerous as to injure the plants, slug-shot or bordeaux-lead arsenate dusted or sprayed over the leaves will hold the pests in check. An ounce of seed will plant about twenty to twenty-five hills, and four pounds of seed will be required for an acre.



TOM WATSON WATERMELONS

MUSKMELON (Cantaloup)

As with the watermelon, it is useless to plant the seed until the ground is dry and warm. The hills may be a little closer together, say 5 or 6 feet apart each way, and the fertilizer should be mixed thoroughly with the soil, as in watermelon culture. Drop six to eight seeds in the hill, and later on, after the insects have been destroyed or left, pull out all but three or four of the strongest plants. Some gardeners prefer to plant the seed in rows from 5 to 6 feet apart and then, when the plants are well up, thin to 4 to 5 feet apart in the row. You will get a good stand of plants this way, without regard to what the bugs may do. If the vines grow too long and rank the ends may be pinched off. The roots of the Muskmelon grow comparatively near the surface of the soil, therefore the cultivation must be shallow. An ounce of seed will plant about sixty hills, and two or three pounds will plant an acre. If the row method is used, an ounce of seed will sow about 150 feet, and four pounds will be required for an acre.

EXTRA-EARLY HACKENSACK. A selection from the old Hackensack melon, ripening from a week to ten days earlier. The skin is netted and deeply ribbed. The flesh is light green; of good quality; the fruit is slightly flattened at the stem and blossom ends. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

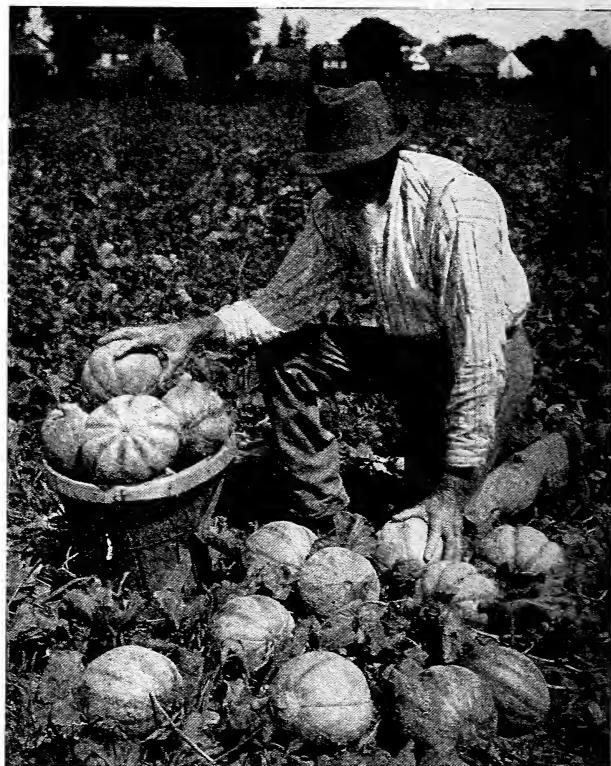
HACKENSACK, or TURK'S CAP. A green-fleshed melon of large size, with a thickly netted skin. Vines are rapid growers and set a goodly number of melons. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

MILLER'S CREAM. Also known as the Osage melon. A good sort for market-gardeners because of the tough skin, which permits handling and shipping. It is of medium size, oval form, olive-green. Flesh thick, of fine texture, light salmon-pink. Seed-cavity small. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EMERALD GEM. Small; the fruit is flattened at both the blossom and stem ends. The skin is smooth, bright green, with narrow stripes of light green. Flesh is thick, deep, rich salmon in color. The fruits should be picked just as soon as they are ripe, and stored in a cool place; if permitted to remain on the vine the skin becomes yellow and the flesh soft and tasteless. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

TIP-TOP. One of the finest salmon-fleshed varieties. Sweet, juicy, of the finest flavor; eatable almost to the rind. The fruit is of large size; comes about midseason, and is borne very freely. Highly recommended for planting in the latitude of Pittsburgh. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

HONEY DEW. A very fine new variety. The skin is smooth; with little netting, and creamy yellow when ripe. Flesh is very thick and can be eaten almost to the rind. Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.



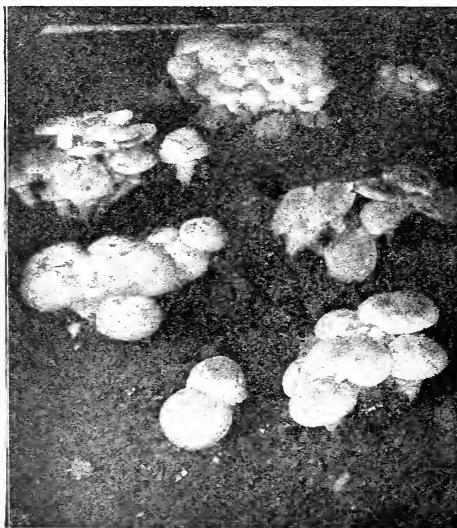
TIP-TOP MUSKMELONS

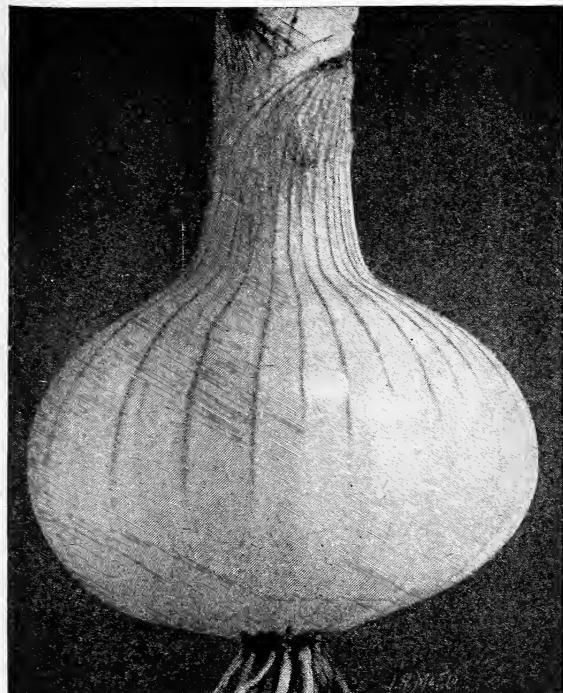
ROCKY FORD. A selection from the old Netted Gem melon, but a great improvement in every way. Rocky Ford is one of the best melons for shipping. The fruit is oval in shape, covered with a coarse netting and slightly ribbed. The flesh is green, thick, solid to the rind, sweet, juicy and of extremely high quality. One of the finest of all melons, and always in demand in market. As a general thing the fruits will weigh from one to one and a half pounds each. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

MUSHROOMS

As a general thing Mushrooms are not grown by the gardener; but there is no reason why they should not be raised by anyone who has a cellar, or dark room, where the temperature can be kept at from 50 to 60 degrees. The soil should be a sandy loam, if possible to procure it, but if not, secure the top-soil from an old pasture. To every bushel of soil add about two bushels of fresh horse manure, thoroughly mixing both; then prepare a bed 3 feet wide, put down a thin layer of the mixture, pack it hard and keep on with this method until the bed is about 8 inches thick. When the temperature in the bed goes down to about 85 degrees, make holes about 1 foot apart and put in small pieces of the spawn. Cover the holes, press the soil slightly; at the end of ten or twelve days cover the bed with fresh soil only, and on top of this put 4 or 5 inches of hay or straw. If an even temperature is maintained you may expect to gather Mushrooms in from six to eight weeks, and the bed will continue to produce for nearly a month. A second crop is sometimes secured by covering the bed with a light fresh soil, which is wet down with warm water and re-covered with hay. We furnish special printed directions free with each order for Lambert's Spore-Culture Spawn, or for 15 cts. we will send, postpaid, an illustrated book on Mushroom Culture, which not only gives the latest improved methods of culture, but full instructions for preparing for market and receipts for cooking.

LAMBERT'S SPORE-CULTURE MUSHROOM SPAWN, NORTHERN-GROWN. 1 brick, 30 cts., 10 bricks, \$2.50; 50 bricks, \$11; 100 bricks, \$20. If wanted by mail, postpaid, add for 1 brick, 10 cts.; 3 bricks, 15 cts.; 5 bricks, 20 cts.





PRIZETAKER ONION

extremely hard, solid and above the average in size. The skin is clean, pale yellow, with a thin neck. The flesh is white, fine-grained and quite mild. A good sort for the home garden and for market. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

YELLOW DUTCH, or STRASBURG. A flat Onion, with fine, clean, mild, white flesh. An old standard variety and particularly good for sowing for sets. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

WHITE PORTUGAL, or SILVERSKIN. A flat Onion that is especially desirable for pickling, as the skin is clean, silvery white and the flavor mild and sweet. If it is grown for pickling, seed should be sown at the rate of twenty-five pounds to the acre. The variety can also be grown for general commercial purposes, and the bulbs will grow to a good size, coming to maturity a little earlier than the ordinary white Onions. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

PRIZETAKER. This is one of the largest fancy yellow Onions, and sometimes is sold under the name of Spanish Onion. It is globe-shaped, almost like a ball; pale yellow skin, with white flesh. Used extensively to grow large Onions from seed. Pkt. 5 cts., oz. 25 cts., 1/4lb. 75 cts., lb. \$2.50.

SOUTHPORT WHITE GLOBE. Southport Onions are of typical globe shape, practically round as a ball. The White Globe is an especially handsome Onion of large size, with skin and flesh that is pure white. The bulbs are hard, solid, generally sure in ripening and possess extra-good keeping qualities. Largely sown by market gardeners for green Onions. The Onions should be pulled immediately on ripening and allowed to dry in the open air, pro-

ONION

Use Mag-o-tite on
Onions. See page 56

Onions in the Garden. The average person's taste seems to crave in early spring the little Onions that are found in the market or growing in the home garden. It is a simple matter to get these little Onions, for they can be raised from seed or sets. Onion seed can be sown extremely early in the spring, and the usual custom is to make drills about 15 inches apart; after the plants come up, they are thinned out to about 2 inches apart in the row.

If Onion sets are used, they should be planted just as early in the spring as the ground is in condition to work; push the bulb into the soil, but do not cover over, allowing about 2 inches of space between each of the sets. When the little plants are from 6 to 8 inches high they will be ready for use. As the season advances the bulb will develop, and as soon as signs of going to seed are observed, bend the top over but do not break it off. The crop of Onions from these sets can be harvested during the month of July. One ounce of seed will sow about 100 feet of row, and five to six pounds will be required for an acre.

EXTRA-EARLY RED. A flat Onion growing very uniform in size. The Onions are ready for use a little earlier than the Wethersfield. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

LARGE RED WETHERSFIELD. The popular standard flat Onion for northern markets. The Onions are of extra-good size, with a deep purplish red skin, with white flesh having threads of purplish tinge. The variety is an excellent keeper, but is inclined to be quite strong in flavor. The Red Wethersfield is an extra market variety and can be stored for winter sales. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

YELLOW DANVERS, FLAT. The bulbs are slightly flattened, with a very thin neck. The skin is a light yellow, the flesh is white, fine-grained and quite mild. A good sort for the home garden and for market. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

YELLOW GLOBE DANVERS. The standard round Onion for eastern markets in general. These bulbs come early in the season and are brownish yellow, the flesh pure white, crisp, with sweet, mild flavor. Pkt. 5 cts., oz. 20 cts., 1/4lb. 60 cts., lb. \$2.

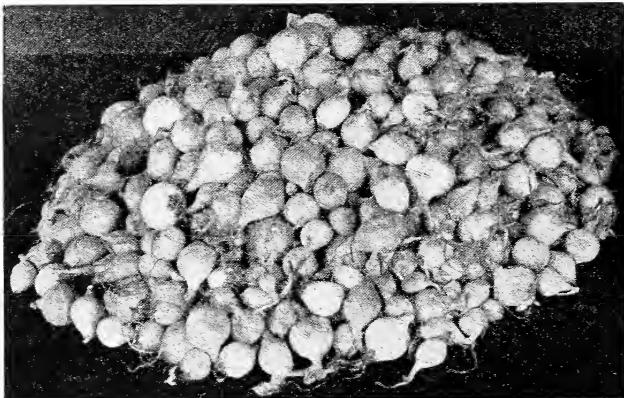


SOUTHPORT WHITE GLOBE ONIONS

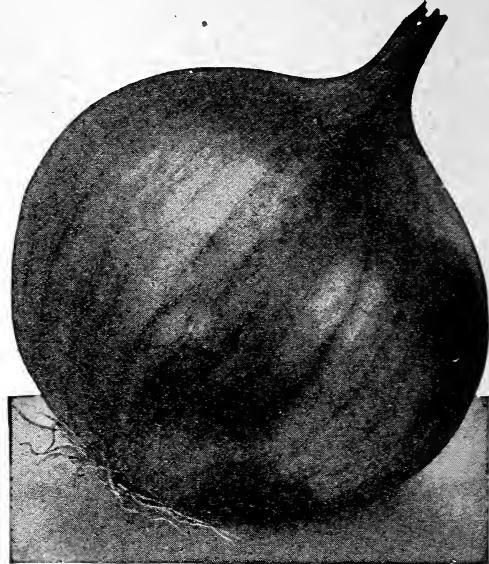
ONIONS, continued

tecting them from rain or dew which causes discoloration of the bulbs. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

WHITE BUNCHING. A mild-flavored Onion especially good for early spring use. If allowed to mature, the bulbs will be large and still continue to be mild. Pkt. 5 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.



ONION SETS



YELLOW GLOBE DANVERS ONION

ONION SETS

We carry a selected stock of Onion Sets in both white and yellow sorts, on which we quote the following prices, which are subject to market changes:

WHITE. Qt. 25 cts., pk. \$1.50, bus. \$4.50.

YELLOW. Qt. 20 cts., pk. \$1.25, bus. \$4.

POTATO ONION SETS. Qt. 30 cts., pk. \$1.75, bus. \$5.50.

If wanted by mail, add for 1 qt. 10 cts., 2 qts. 12 cts., 3 qts. 15 cts. Special prices on large quantities quoted on request

MUSTARD

When the leaves are young and small they may be used as a salad or boiled and served like spinach. Seed should be sown every two weeks, using about an ounce of seed for each 75 feet of row, in the open ground. Seed may also be sown in a coldframe, a hotbed or even in a greenhouse, and the plants will come on for use during the winter months.

SOUTHERN GIANT CURLED. Seed should be sown in early spring. Plants are used as a salad when young, or cooked the same as spinach when more matured. The plants grow unusually tall, frequently reaching 2 feet in height. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts.

WHITE CHINESE. The leaves can be used in three or four weeks after the seed is planted, and can be cut until late fall. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts.

OKRA

In the South this vegetable is commonly called "Gumbo," and when the seed-pods are quite small they are used for flavoring and thickening soups. The pods must be used when small, for as they mature they get hard and stringy. If early plants are desired, sow the seed in a hotbed and then reset the plants in the open ground. Later in the season the seed may be sown outside, in drills about an inch deep and about 2 feet apart. When the plants are up, thin them out so they will stand about 1 foot apart in the row. One ounce of seed will sow about 25 feet of row, and approximately twenty pounds will be required for an acre.

LONG GREEN. One of the older sorts that bears quantities of pods, 4 to 5 inches in length, deep green in color, and comparatively slow in ripening. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.

DWARF PROLIFIC. A low-growing plant that produces quite early in the season. The pods themselves are about average length—4 or 5 inches—and are produced very freely. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 60 cts.



LONG GREEN OKRA

PARSNIP

The soil for Parsnips should be spaded from 12 to 14 inches deep, because the roots go deep into the ground, and unless the subsoil is fairly loose the roots are likely to spread rather than grow in one long tap-root. The simplest way is to sow the seed in drills, covering it half an inch; after the plants are up, thin them out so that they may have at least 6 inches of space between the plants.

PARSNIP, continued

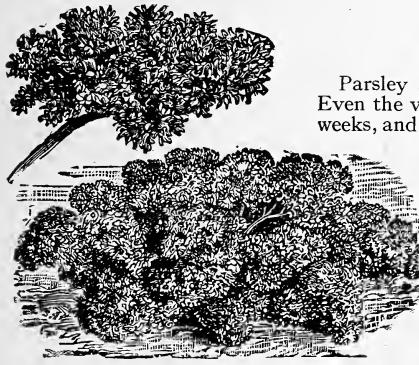
Parsnips are extremely hardy, and the crop may be left in the ground until late autumn or even all through the winter, the roots being dug as required. If it is necessary to dig them in early winter they may be stored in the cellar in sand or earth, but you will find they are much better if they are left outside in the open ground. Two ounces of seed will sow about 300 feet of row; eight pounds will be required for one acre.

HOLLOW CROWN. This variety is also known as "Student" and "Long Smooth." The root grows about four times as long as it is broad at the crown. The skin is white and the flesh when cooked is a very delicate orange. The Hollow Crown is essentially a table vegetable. Pkt. 5 cts., oz. 15 cts., 1/4lb. 35 cts., lb. \$1.

GUERNSEY. Thicker than the preceding variety. The skin is white and the root is fine-grained, with practically no hard center. Pkt. 5 cts., oz. 15 cts., 1/4lb. 35 cts., lb. \$1.

MALTESE HALF-LONG. Roots fine-grained; skin ivory-white; fine quality. Pkt. 5 cts., oz. 15 cts., 1/4lb. 35 cts., lb. \$1.

WHITE LISBON. Similar to Hollow Crown, but smoother and with whiter skin. Pkt. 5 cts., oz. 15 cts., 1/4lb. 35 cts., lb. \$1.



DOUBLE-CURLED PARSLEY

PARSLEY

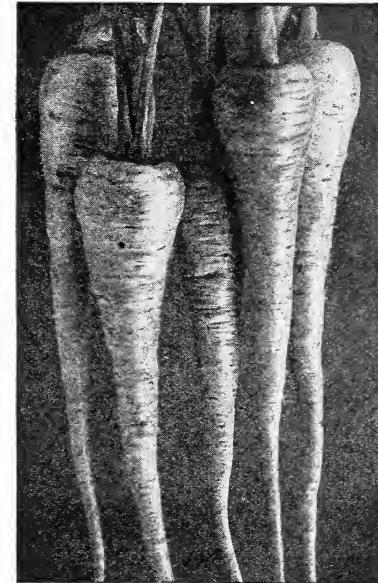
Parsley seed is extremely slow in starting into growth. Even the very freshest seed will require from six to eight weeks, and older seed will require a proportionately longer time, even if it starts at all. In the course of two or three months after the plants appear, you will be able to cut some of the leaves and, as the summer advances, the plants will increase so that quantities of leaves may be cut for various purposes. Parsley-beds may be carried over the winter preferably, build a frame around the plants, two ounces of seed for 300 feet of row; eight pounds for an acre.

DOUBLE-CURLED. The foliage of this variety is deeply cut and crinkled, the segments often turning back an inch and a half or more. The color is a deep green; a most valuable sort for garnishing. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

CHAMPION MOSS CURLED. This is one of the hardy varieties that can be cut the year round. The leaves are crimped and curled somewhat like the preceding sort. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

PLAIN, or SINGLE. The flavor of the Single Curled Parsley is rather stronger than that of the other varieties, and on this account the variety is especially good for flavoring. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

HAMBURG, TURNIP-ROOTED. Similar to the above, except that the roots are only about half as long. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.



HOLLOW CROWN PARSNIPS

if given a careful mulching of leaves, or covering them with a sash. Two ounces of seed for 300 feet of row; eight pounds for an acre.

PEPPER

Plants of Pepper should be grown in the same careful manner as eggplant. They are natives of a warm climate and, therefore, in our colder sections must be given protection so that they may not be injured by cold weather. Sow the seeds in flats some time during the month of March, and when they show the second or third leaf they should be transferred into small pots or into flats, setting them 4 to 5 inches apart. One ounce of seed will produce about 1,500 plants.

RUBY KING. A red Pepper bearing large fruits somewhat of the shape of the Bell or Bull Nose variety. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

SWEET SPANISH. A large, rich scarlet Pepper of exceptionally mild flavor. One of the few good sorts for baking or for mangoes. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

BULL NOSE. The fruits are deep green, turning to a vivid scarlet as they mature. Flesh is mild, quite thick and fine for slicing. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

LONG RED CAYENNE. The pods are cone-shaped, bright scarlet, rather small, and produced very freely on the plants. Both the odor and flavor are extremely pungent. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

SMALL CAYENNE. Pods bright red; 1 to 1 1/2 in. long. Pkt. 10c., oz. 50c., 1/4lb. \$1.50, lb. \$5.

CHINESE GIANT. The plants of this variety grow about 2 feet tall, and produce a large number of extra-large bright scarlet Peppers. The flesh is thick with small seed-cavities. Pkt. 10 cts., oz. 60 cts., 1/4lb. \$1.75, lb. \$6.

RUBY GIANT. Very large; deep red; mild; desirable for slicing or for mangoes. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.

PIMENTO. This variety was introduced from Spain and we believe it to be a very valuable addition to the present varieties, as it has qualities superior to any of the well-known kinds. While not so large as the Chinese Giant, it is heavier on account of its extremely thick flesh, which has a mild, sweet, yet deliciously pungent flavor when used either green or ripe. The plant is very prolific, producing a large number of Peppers, each weighing from five to ten ounces. Choice specimens have been known to weigh as much as twelve ounces each. Pkt. 10 cts., oz. 50 cts., 1/4lb. \$1.50, lb. \$5.



RUBY GIANT PEPPER



GRADUS PEAS

GARDEN PEAS

Use Farmogerm on
Peas. See page 51

Peas in the Garden. As a general thing, the smooth-seeded sorts are considered hardier than the wrinkled varieties and therefore can be planted a little earlier in the spring. The rows for the garden can be made double, with 6 to 8 inches of space between the rows. For convenience in cultivating and picking the crop, something like 3 feet of space should be allowed between the double rows. If grown in the open field, the single-row method is better and space can be allowed for a horse cultivator. The early sorts can be sown as soon as the ground is fit for working in the spring, and the sowing may be continued at intervals of about two weeks up to the first of July, which method will give a succession of Peas the greater part of the summer. A quart of seed will sow about 100 feet of single row; from one and one-half to two bushels will be required for an acre.

THOMAS LAXTON. (Wrinkled.) This is one of the superior extra-early Peas for the home garden and for early market. The vines grow from 2 to 3 feet high and produce quantities of pods containing from six to eight good-sized Peas. The quality is all that can be desired in any sort. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

GRADUS. (Wrinkled.) An extra-early Pea, much superior to all smooth sorts. The pods are long, usually containing from eight to ten Peas. The vine is $2\frac{1}{2}$ to 3 feet high. No sort introduced within the past few years has attracted quite so much attention as Gradus. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LITTLE MARVEL. (Wrinkled.) One of the best new dwarf varieties. The vines are usually 12 to 18 inches high, and are wonderfully productive of blunt-ended, dark pods that are well filled with large Peas which are of excellent flavor and very tender. It will undoubtedly supersede the other extra-early sorts. Ready for use a few days before Gradus. As a dwarf, it is suited for the home garden or for market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

PROLIFIC EARLY MARKET. (Smooth.) A smooth-seeded, extra-early sort which can be sown extremely early in the spring. Produces a goodly quantity of pods, well filled with Peas. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

FIRST AND BEST. (Smooth.) The pods of this variety are usually ready for picking from forty to forty-five days after planting the seed. The vines grow about 30 inches high and ripen the pods practically at one time. The Peas are of good quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

ALASKA. (Smooth.) An extremely early sort. The vines are about 3 feet high, producing quantities of pods. Peas are smooth, bluish green in color, of superior flavor and of excellent quality in every way. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$2.75, bus. \$10.

PEDIGREE EXTRA-EARLY. (Smooth.) A selected extra-early, smooth Pea. Vines about 30 inches high. Matures a week later than Alaska and bears much larger pods. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 50c., pk. \$2.75, bus. \$10.

PIONEER. (Wrinkled.) A dwarf, early variety with large, curved, dark green pods. The vines grow about 18 inches high. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

PRINCE EDWARD. (Wrinkled.) A large-podded variety that is very desirable for general crop for midseason and later. The vines grow from 3 to 4 feet high; the large pods are borne very freely and are well filled with Peas of an excellent quality. Prince Edward is one of the newer varieties of wrinkled Peas and bids fair to take a high place for market-gardeners or for home use. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LAXTONIAN. (Wrinkled.) A dwarf Pea from the gardens of the English introducer of Thomas Laxton, and in all probability Laxtonian is a selection from that variety. Large, curved, dark green, pointed pods; vines about 18 inches in height. May be classed as a second-early sort. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

SUTTON'S EXCELSIOR. (Wrinkled.) The plants are dwarf, seldom growing over 20 inches high. The seed is usually hardy and can be planted as early as the smooth sorts. The pods are large and broad, well filled, making an exceptionally good variety for home use. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

NOTT'S EXCELSIOR. (Wrinkled.) A dwarf Pea that is extra early and of fine quality. The vines are vigorous in growth, but seldom reach more than 18 inches in height. The pods are of medium size, but filled to the very end with Peas, and are produced in large quantities. It is one of the standard high-grade sorts that is always popular in the market and with the home-garden planter. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 50c., pk. \$3.25, bus. \$12.

ALDERMAN. (Wrinkled.) This is one of the later sorts, the vines growing 4 to 5 feet high. The pods are dark green, often over 5 inches in length and containing from eight to ten large Peas. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

AT THESE PRICES WE DO NOT PAY POSTAGE. IF WANTED BY MAIL, ADD 8 CTS. PER PINT, 10 CTS. PER QUART

THOMAS LAXTON
PEAS

PEAS, continued

CARTERS EIGHT WEEKS. (Smooth.) A very early dwarf Pea with a large pod. Vines grow about 20 inches high. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WORLD'S RECORD. (Wrinkled.) An early type of Gradus, maturing from two to four days earlier than the earliest strain of that variety. Pods are not quite so long but the Pea is of the same excellent quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

MARKET SURPRISE. (Smooth.) Claimed to be earlier than the Alaska. The pod is considerably larger than the Pedigree Extra-Early or Alaska, and the Peas come to maturity all at one time. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

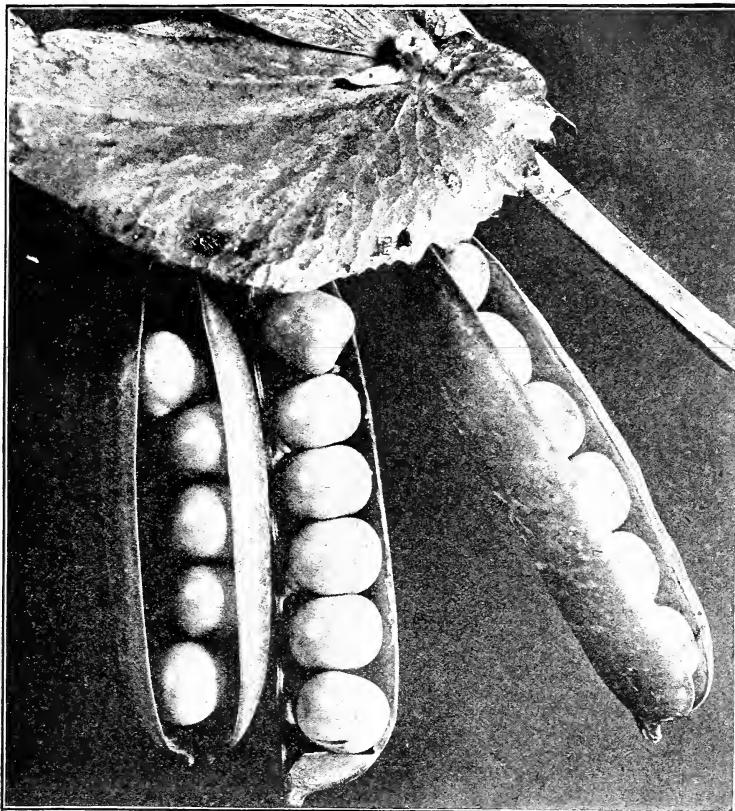
DUKE OF ALBANY. (Wrinkled.) A late variety that has made a name for itself with gardeners who want a standard Pea for market or home use. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

DWARF TELEPHONE. (Wrinkled.) This is also known in the trade under the name of "Daisy." It is a medium-early wrinkled Pea, bearing well-filled, heavy pods. Vines grow about 2 feet high. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

IMPROVED TELEPHONE. (Wrinkled.) The vines grow about 4 feet high. The pods are extra large and are filled with Peas that are of an immense size. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

AMERICAN WONDER. (Wrinkled.) A dwarf variety, valuable because of its earliness and productiveness. The vines are about 12 inches in height and produce a profusion of good-sized pods. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

DUKE OF YORK. (Wrinkled.) In the same class as Telephone, but earlier and more dwarf. Sweet and fine in flavor. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.



NOTT'S EXCELSIOR PEAS



KING OF MAMMOTHS PUMPKIN

POTLATCH. (Wrinkled.) The vines grow about 2 feet tall, bearing a heavy crop of large, deep green pods, which are filled with from ten to twelve good-sized dark green Peas of an exceptionally fine flavor. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

MAMMOTH-PODDED SUGAR. The whole pod of this variety can be cooked and served, and will equal snap beans in flavor and quality. The vines grow from 4 to $4\frac{1}{2}$ feet in height. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

PUMPKINS

Pumpkin seed can be planted any time after the ground gets warm, the usual period being from the middle of May to the middle of June. It is customary to plant the seeds in hills, which are made from 6 to 8 feet apart each way, dropping from four to eight seeds in a hill. It is a good plan to pinch back the vines after they get 4 or 5 feet long; if large specimens are desired, permit only one or two to mature on each vine. One ounce of seed will plant about twenty-five hills; four to five pounds for an acre.

MAMMOTH GOLDEN CUSHAW. Grows to a large size; of a rich golden orange, although it is dark green in the early stages of growth. Flesh is a deep, rich yellow; thick, sweet and of fine flavor. One of the best of the Crooknecks. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

PUMPKINS, continued

LIVINGSTON'S CUSHAW. This is the old standard Cushaw and a great favorite. Beautiful in appearance, mottled green, white-striped. Flesh yellow, fine-grained and sweet. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

SMALL SUGAR. The outer skin is deep orange; the Pumpkin is small, but has an exceptionally fine-grained flesh of excellent sugary flavor. The vines grow freely and set quantities of fruit. Notwithstanding the fact that this is a small-sized Pumpkin, it is one of the most satisfactory for house use. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

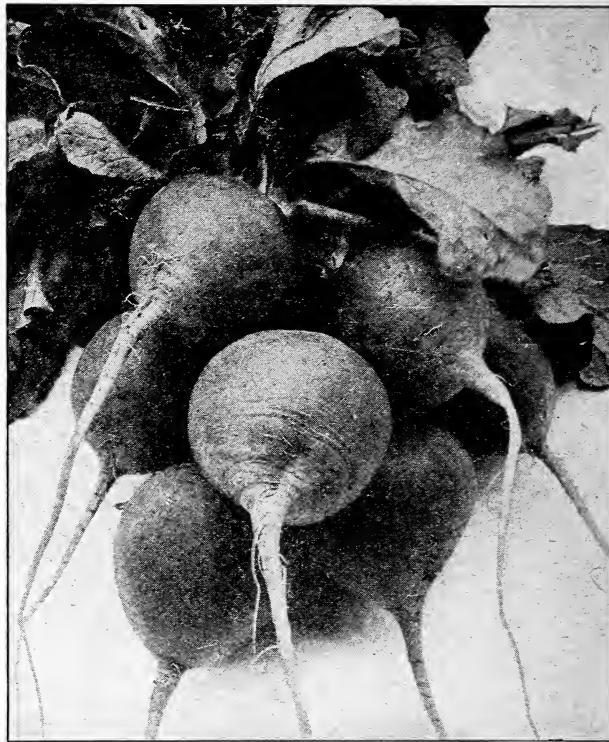
LARGE CHEESE. A flat Pumpkin with a rich buff-yellow skin. The fruit is large, of good appearance, which makes it a splendid sort for marketing, while the quality recommends it for home use and for canning. Pkt. 5 cts., oz. 10 cts., 1/4lb. 30 cts., lb. \$1.

MAMMOTH TOURS. Pumpkins of this variety grow to an enormous size, frequently weighing 100 pounds or more. The flesh is rather coarse and is used principally for stock-feeding. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

KING OF MAMMOTHS. Another extra-large Pumpkin, almost round in shape, with slightly flattened ends. It is a splendid keeper and one of the best sorts for stock-feeding. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

CONNECTICUT FIELD. This is the common Pumpkin that we have known from boyhood. The fruit is produced in great abundance, is light yellow, but the flesh is coarse and usually suitable for stock-feeding only. Oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

KENTUCKY FIELD. Unlike the Connecticut Field Pumpkin this variety can be used for the table. The fruit is similar in appearance to the preceding, although it does not usually grow quite so large. Oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.



CRIMSON GIANT RADISHES

RADISHES

Use Mag-o-tite on
Radishes. See page 56

Radishes in the Garden. If there is any vegetable that may be considered as universal it is the Radish, for it can be grown almost anywhere. Of course, Radishes grow better in soil that is suited to them, but they are not particular in their requirements. If the soil in which they are grown is sandy there will be a great advantage; if the soil is inclined to be clay, mix in coal-ashes or sand or any other material that will tend to make the soil loose. Fertilizers may be used as required. For extra-early Radishes, sow the seed in a hotbed in February or early March, pulling out the plants as soon as they are large enough and show appearance of crowding. In the garden, the seed may be sown every ten days or two weeks from the middle of March to September, thus giving a succession of Radishes throughout the season. For garden culture, sow the seed in drills, not too thickly, and pull out the small plants when they begin to crowd each other. Another important thing in growing Radishes is to keep them moving from the very start—if they grow slowly they will be pithy and not of particular value for the table. With warm, light soil and reasonable cultivation any gardener can grow Radishes. One ounce of seed will sow about 100 feet of drill; eight to ten pounds will be required for an acre.

VERY EARLY WHITE-TIP FORCING. A beautiful bright scarlet Radish, with white tip. Nearly as early as Non Plus Ultra; small top. One of the best forcing varieties. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1.25.

CINCINNATI MARKET. An extra-fine variety for growing under glass; tops are small and the roots grow from 5 to 7 inches in length; skin bright scarlet, very thin, with crisp and brittle flesh. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

FRENCH BREAKFAST. The upper portion of this Radish is bright carmine, while the tip is clear white; flesh is crisp, tender and of mild flavor. Good for both open-ground culture and for forcing. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

LONG SCARLET SHORT-TOP. This variety is ready for use in twenty to twenty-five days after planting the seed; the roots grow from 5 to 6 inches long, with about one-half their length above the ground. The outer skin is bright scarlet. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

EARLY SCARLET TURNIP. A particularly good sort for forcing; the roots are of medium size; perfectly smooth and will remain fit for use for some little time. The top is small, which permits close planting. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

EARLY SCARLET GLOBE. A popular forcing variety, owing to its very quick growth and fine bright scarlet color. Shape a trifle oblong. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

WHITE BOX. A turnip-shaped Radish, especially good for growing under glass. Rapid growth, with a remarkably small top, characterizes this variety. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

NON PLUS ULTRA. Said to be the earliest forcing variety. Roots are rather small, of perfect globe shape, and deep rich scarlet in color; flesh is clear white. The roots are ready for use in twenty days. Pkt. 5 cts., oz. 15 cts., 1/4lb. 40 cts., lb. \$1

WHITE STRASBURG. The roots of this variety are from 3 to 5 inches in length, clear white. Considered a leading market variety on account of the earliness and showy appearance. Pkt. 5 cts., oz. 10 cts., 1/4lb. 25 cts., lb. 75 cts.

CHARTIER, IMPROVED. The selection is from the old Chartier Radish. The roots are larger than the old variety, and of deeper rose color, which shades to white at the bottom. A splendid sort for the open ground, growing very rapidly, coming into use twenty to twenty-five days after planting, with additional advantage in that the roots will keep crisp some time after maturity, and after pulling. Pkt. 5c., oz. 10c., 1/4lb. 25c., lb. 75c.

RADISHES, continued

WHITE LADY FINGER. An extra-fine garden Radish. Both skin and flesh are pure white; the flavor is quite mild, and the roots seldom become pithy, remaining in good condition for a considerable length of time. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WHITE VIENNA. Almost identical with the White Lady Finger. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WHITE STUTTGART. A late, pure white variety; roots grow rapidly and attain a large size; shaped somewhat like a top. Of good flavor and a good keeper; not liable to run to seed. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

MARKET-GARDENER'S LONG SCARLET. Identically the same as Long Scarlet Short-Top, but with a little larger top. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

GIANT BUTTER. A round, red Radish, in shape and appearance very much like Non Plus Ultra, but much larger; it grows quickly and is valuable for forcing. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

GOLDEN YELLOW OVAL. An oval Radish about $1\frac{1}{2}$ inches long; fine for forcing or the open ground. A good summer variety. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

ICICLE. A pure white Radish that grows about 4 inches long, somewhat stump-rooted in shape. A splendid variety for forcing or for successive sowing in the garden. Said to remain in good condition longer than other early varieties. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

BURPEE'S SCARLET BUTTON. A small, extra-early, bright red, round Radish. Will mature from eighteen to twenty days after sowing. The flesh is mild, crisp and pure white. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CRIMSON GIANT. An early turnip-shaped variety; color carmine; flesh firm and does not become pithy. Highly recommended for garden planting as well as for forcing. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WINTER RADISHES

LONG BLACK SPANISH. Roots are from 5 to 8 inches long and quite thick at the top. The skin is black, but the flesh is clear white. One of the best of the Winter Radishes. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

LONG WHITE SPANISH. Exactly like the preceding except in color of skin. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

CHINESE ROSE. The roots are from 3 to 4 inches in length, blunt at end and very smooth. Skin bright rose; flesh crisp and tender. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

ROUND BLACK SPANISH. In a good many markets the round Radish is preferred to the long, and for such markets the Round Black Spanish should be grown. Similar to the Long Black Spanish excepting in the shape. One of the finest sorts for winter use. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

CELESTIAL. A new stump-rooted variety with white skin; the seed can be sown from the first of July to the middle of August, which makes it an especially good variety for market-gardeners. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

RHUBARB

A rich, sandy soil, wet but well drained, is best for Rhubarb. While it is frequently propagated from seed, only a percentage comes true. It is cheaper to grow from seed and discard untrue plants. The popular method, however, is to use young plants propagated from the crown. Set plants 3 by 6 feet. The best stems are produced the second year, but it continues to produce for several years. When the blossom-stalk appears, it should be cut back well into the ground. Set the crowns of the plants so that they are 1 inch under the surface of the soil. Choose a place where the soil will be moist at all times.

VICTORIA. The variety most generally in use. It comes fairly true from seed. Seed, pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 45 cts., lb. \$1.25. Roots, 15 cts. each, \$1.50 per doz.

SQUASH

Growing Squashes in the Garden. Like the melon, the Squash is a tropical vegetable and the seed should not be sown until the ground is warm and dry. The seed is usually planted in hills, which should be well fertilized. For the bush varieties the hills should be about 4 feet each way, and for the winter sorts from 10 to 12 feet each way. Use plenty of seed in each hill, twelve to fifteen anyway, so that the loss from insects will not be serious; after the plants get a good start, pull out all but four or five in each hill. The squash-vine borer may cause more or less trouble through the season, but the difficulty can be reduced to a minimum by sprinkling tobacco dust, or some other insecticide, close around the plants. The black squash bug can best be kept in check by hand picking, but spraying with arsenate of lead or slug-shot is the proper remedy for the striped beetle. One ounce of Squash seed will plant from fifteen to twenty hills; three to five pounds of seed will be required for an acre, according to variety.

FORDHOOK. This variety is good for both summer and winter use. The Squashes have a thin, light yellow skin, with a thick, straw-colored flesh. They grow from 8 to 10 inches long and are oblong in form. If they are allowed to ripen on the vine they can be stored and kept in good condition through the entire winter. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

MAMMOTH WHITE BUSH. An ivory-white Squash, round in form, with scalloped edges. Matures early and the plants will bear freely until killed by frost. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

ESSEX HYBRID. It is a cross between the Hubbard and the American Turban Squashes. Flesh is fine-grained, thick, and solid. Vines are rapid growers and produce freely. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

BOSTON MARROW. A winter Squash, shaped very much like the Hubbard, but rich golden orange in color. Can be used for canning purposes, served as a table vegetable or made into pies. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

WARTED HUBBARD. In size and color this is exactly like the old familiar Hubbard Squash, but heavily warted. Produces a large number of fruits which will keep even to late winter. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

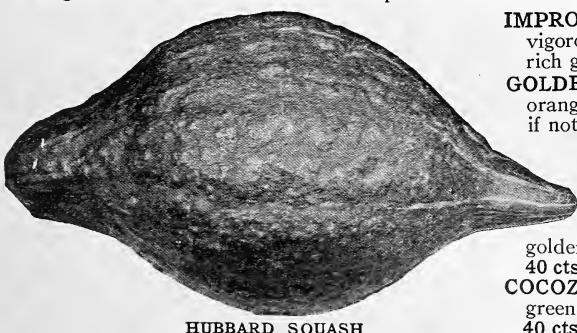
IMPROVED HUBBARD. A selection from the old Hubbard, producing a more vigorous vine and slightly larger fruits. The skin is dark green and the flesh rich golden yellow. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

GOLDEN HUBBARD. Another Squash of the Hubbard family, but with a rich orange-yellow skin that turns to a salmon-red when fully ripe; fully as good as, if not superior to, the original. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

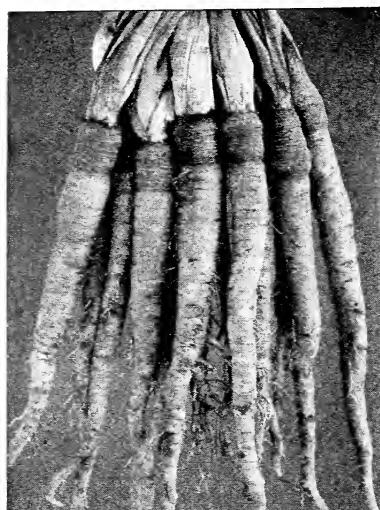
ORANGE MARROW. A selection from the Boston Marrow, but earlier. The skin has the same familiar orange-red color. The flesh is thick, fine-grained and sweet in flavor. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

YELLOW SUMMER CROOKNECK. Fruit long and warded; color golden yellow; fine and tender when young. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

COCOZELLE (Italian Vegetable Marrow). Fruit about 6 to 8 inches long, dark green, yellow, lighter green stripes. Bush form. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.



HUBBARD SQUASH



MAMMOTH SANDWICH ISLAND SALSIFY

NEW ZEALAND. An excellent sort for summer use, as the plants will endure heat and dry weather. The leaves are small, but very thick. The plants are strong growers, and from one sowing the crop may be gathered at various times during the summer. Exceptionally valuable variety. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1, 5 lbs. \$4.50, 10 lbs. \$8.

IMPROVED LARGE ROUND THICK-LEAVED. This is a valuable sort for market-gardeners and is particularly adapted for early spring sowing. The leaves are thick and somewhat crumpled. This variety can be sown in September for late winter and extra-early spring use. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

BLOOMSDALE SAVOY-LEAVED. The leaves of this Spinach are very similar to those of the Savoy cabbage, and probably the plants are the hardest of any of the Savoy class. It is an exceptionally good sort for autumn planting. The leaves grow upright, are curled and crimped, thick and fleshy. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

LONG-STANDING. So named because it is extremely slow in running to seed. Large, thick, and crinkled, and especially good in quality. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

VICTORIA. Another long-standing sort, with foliage of unusually dark green. A good variety for summer use, because it is not susceptible to heat and dry weather. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

TRIUMPH. Remains in marketable condition much longer than most other varieties. A long-standing variety with dark green, crumpled leaves, which are large, thick, and succulent. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

SUNFLOWER

This is the large-flowering variety used principally by farmers and poultry breeders. Seed can be sown early in the spring, allowing the plants to stand about 4 feet apart each way. Three pounds of seed will plant an acre. Sunflowers should be grown in good soil where they will get plenty of sun.

MAMMOTH RUSSIAN. Probably the strongest grower of any of the Sunflowers, producing seed-heads of exceptionally large size. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 40 cts.

SALSIFY

Salsify is commonly called "Vegetable Oyster" or "Oyster Plant." It is a garden vegetable of extremely easy cultivation. The soil should be spaded to a good depth, because the roots grow straight down and often are 10 to 12 inches in length. The seed should be sown in drills, which are made 15 inches apart, and from $1\frac{1}{2}$ to 2 inches deep. When the little plants get about 4 inches high, thin them out so that they stand about 3 inches apart. The roots may be dug in late fall and stored the same as carrots, or they can be left in the ground until spring, when they will be found very tender. An ounce of seed will sow about 50 feet of drill; ten pounds for an acre.

MAMMOTH SANDWICH ISLAND. The roots of this variety are of enormous size, probably twice as large as those of other sorts. Notwithstanding the large size the roots are of good quality, without hard core. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

SPINACH

Spinach is considered one of the most healthful of all vegetables used as "greens." If plants are wanted for early use in spring the seed should be sown in September, and the little plants protected during the winter with a mulch of hay or straw. For summer and early fall use the seed may be sown in the early part of March, and successive sowings made until about the first of June. Sowing in drills is the usual method, covering the seed about an inch deep and thinning out the plants after two or three leaves have formed. One ounce of seed will sow about 100 feet of drill; fourteen to fifteen pounds for an acre.



IMPROVED LARGE ROUND THICK-LEAVED SPINACH

Heavy cropper and one of the earliest. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

TOBACCO

Tobacco seed must be sown early in the spring in frames or seedbed in rich soil. Reset the plants in the open ground after the weather has become warm, making space between the rows about 4 feet. The cultivation is practically the same as for corn.

CONNECTICUT SEED LEAF. One of the oldest and best varieties. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

HAVANA. Heavy cropper and one of the earliest. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

We have been supplying the most critical market-gardeners for more than forty years with vegetable seeds. Whether you buy in packets or in pounds, pints or bushels, you get the same fresh stock we furnish the largest market-gardeners. No order is too small to merit our best attention. Our stock is fresh from the most reliable growers of Europe and America.

TOMATOES

Growing Tomatoes in the Garden. If the gardener wants extra-early plants he must start the seed under glass the latter part of January or early in February. He must also be careful to select the extra-early varieties. There are several simple methods of starting Tomato plants which can be followed out by the owner of even the smallest garden. If you have a greenhouse or a hotbed, the

seed can be sown in flats, and after the plants are 2 to 3 inches high, transfer them into small pots, or dirt bands, allowing them to grow to 5 or 6 inches in height, and then transplant again. If you do not have any of these facilities, the seed can be started in a sunny window in the house, following the same general plan of caring for the little plants. When they are transplanted in the flats for the last time, give them plenty of room, so that when they are finally transplanted to the garden they can be lifted without injuring the roots. In the garden the plants should stand about 4 feet apart each way. During the growing season they should be kept well cultivated; it is likewise a good plan to support the plants by tying them to a stake or permit them to grow over a low frame. An ounce of seed will produce about 2,000 plants; one-quarter pound should give sufficient plants for one acre.

JOHN BAER. One of the earliest and best varieties for the market-gardener. Has a wonderful, glistening, brilliant, bright red color and in shape and form exactly like its photograph, entirely free from core, almost seedless and ripens right up to the stem. Has a mild, deliciously sweet flavor and is an enormous yielder. Our stock of this beautiful and valuable variety comes direct from the originator, which insures its genuineness. No. 1, pkt. 15 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1, $\frac{1}{4}$ lb. \$3, lb. \$10. No. 2, pkt. 5 cts. $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

NORTHERN ADIRONDACK EARLIANA. Has become known the country over as the best extra-early variety, and almost as an entirely new sort, for it is distinctly different from and better than the good old standby, Sparks' Earliana. Line-breeding has developed, in the case of the Northern Adirondack Earliana, a fruit which colors nearly as well, is as smooth and nearly as globe-shaped as Jewel, is earlier and as hard as Bonny Best. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

EARLIANA, SPARKS'. This is the original Earliana Tomato. The first crop was grown in New Jersey, and at once came into market favor because of its extreme earliness. The fruits are of good size, bright red, solid, with comparatively few seeds. The plants are compact growers and set the fruit in clusters. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

JUNE PINK. The fruit of this Tomato is borne in clusters. The Tomatoes are of medium size, averaging from $2\frac{1}{2}$ to 3 inches in diameter and about $2\frac{1}{2}$ inches in thickness. The color is bright pink, the skin is smooth and the surface of the fruit quite regular. It ripens fully as early as the old strain of Earliana and from ten to fourteen days earlier than the Early Jewel. It is one of the best of the pink Tomatoes. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

BONNY BEST. Another extra-early Tomato which sets its fruit in clusters. The color is glowing scarlet. The valuable peculiarity of the Tomato is the fact that it does not crack and that it also ripens clear to the stem.

It is remarkable for its evenness of size, which characteristic is maintained to the end of the season better than in other varieties. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

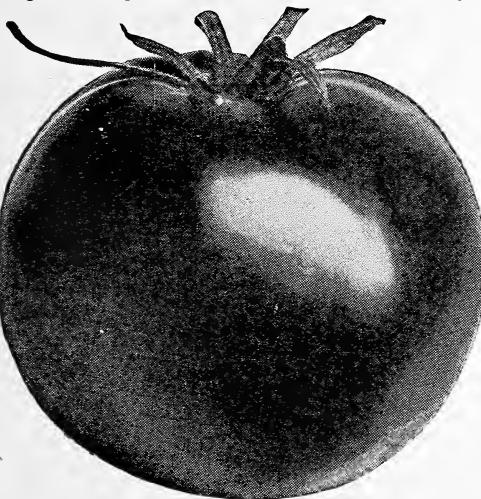
CHALK'S EARLY JEWEL. A bright scarlet Tomato that should be planted to market immediately after the Earliana varieties. The flesh is thick and solid, and it is one of the best early sorts for shipping. Plants are strong growers and bear heavy crops. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

EARLY DETROIT. A new Tomato of merit; fruit smooth, uniform, nearly globe-shaped, firm, and of fine quality; color purplish pink; season early. Is one of the finest shipping varieties grown. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

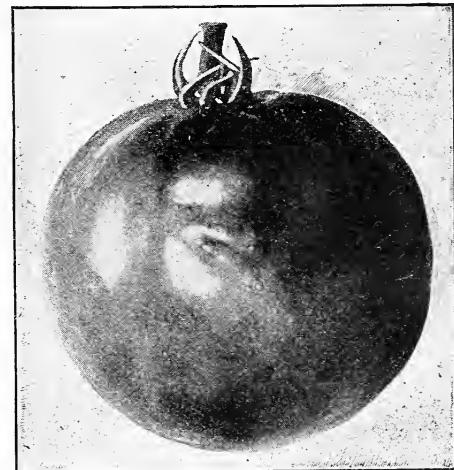
BEAUTY. This variety came into favor with growers because the fruits were solid and could be shipped a long distance. The fruits are of good shape, produced in clusters, and the plants continue to bear until quite late in the season.

Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

TRUCKERS' FAVORITE. In color the fruit is purplish red. Form is regular, of good size, thick-meated and solid. Vines are strong growers, are not subject to rust nor blight, and will bear continuously until killed by frost. Even the latest fruits are of good size and equal the earliest in quality. A dependable main-crop Tomato. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.



JOHN BAER TOMATO



BONNY BEST TOMATO



LIVINGSTON'S GLOBE TOMATO

TOMATOES, continued

BEEFSTEAK. Late; purplish pink; vines strong and vigorous; very little seed, large solid fruit. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

MATCHLESS. Solid, bright red, with comparatively few seeds. A strong grower and bears large quantities of fruits. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

LIVINGSTON'S GLOBE. Fruits are of large size, perfectly smooth, practically round, but slightly flattened at the stem; has fine flesh, and very few seeds are found, especially in the early fruits. The color is a glossy rose, slightly tinged with purple. One of the largest producers and a good shipper. Pkt. 5c., $\frac{1}{2}$ oz. 35c., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

DWARF CHAMPION. Fruit borne in clusters; color glossy purple; flesh firm and thick. Good for shipping. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

STONE. An unusually productive bright red, smooth Tomato. It is a standard sort for canning purposes, and great quantities are grown for this purpose in the big canning sections. It is quite likely that more Tomatoes of this variety are produced than of any half-dozen varieties combined. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

DWARF STONE. A dwarf, medium early variety. The fruits are of a good, bright red color, smooth, very solid and large. One of the best dwarf varieties. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

BUCKEYE STATE. A dark purple Tomato with smooth skin and solid flesh. Fruits are extra large and are borne in clusters. Unlike many other large varieties, Buckeye State presents an even and smooth surface and seldom cracks when fully ripened. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2.25, lb. \$8.

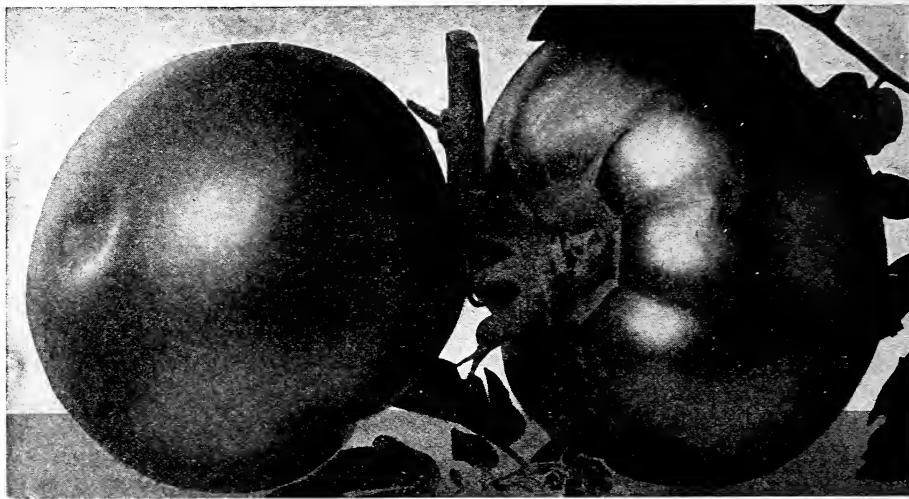
MONTEREY. An exceedingly large Tomato with a slightly rough surface. Some specimens have been grown that weighed two pounds each. As an extra-choice variety no other sort equals Monterey. The fruit is slightly oblong in form, somewhat ridged, is exceptionally solid, with few seeds. The vines grow freely, producing unusually well for so large a variety. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

YELLOW MONTEREY. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

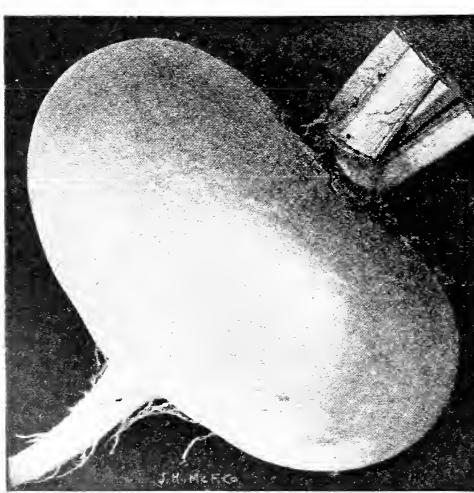
MAGNUS. Introduced some ten or twelve years ago by an American Tomato specialist. The fruit matures early, is thick, heavy and solid, deep purple in color. It is valuable both as an early Tomato and for general main-crop planting. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

RED ROCK. A quick grower, producing fruit in about a hundred days after sowing the seed. Extra smooth, very large, bright red, exceedingly productive. Splendid for truckers and for canners. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

YELLOW PLUM. Shaped very much like a plum; is particularly valuable for preserving. Color is rich golden yellow. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.



STONE TOMATOES



PURPLE-TOP STRAP-LEAF TURNIP

GREATER BALTIMORE. Very desirable canning variety; smooth, well formed and thick from stem to blossom ends; produces fruits in large clusters. One of the best of the main-crop varieties. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

GOLDEN QUEEN. Also known as Queen of the Yellows. Fruit of fairly large size, smooth, entirely free from ridges. One of the best of the Yellow Tomatoes for table use. The color is very attractive, and it makes a most pleasing dish for the table. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

TURNIPS

Use Mag-o-tite on Turnips. See page 56

For early Turnips sow the seed of the flat varieties in the open ground as early as possible in the spring. Make the drills about a foot apart, and do not sow the seed thickly, as the plants should stand from 3 to 4 inches apart, and much labor will be avoided if you are not obliged to pull them out. Seed may be sown every two weeks until the middle of June so that a succession may be had until fall. The seed for late Turnips—that is, roots for late fall and winter use—should be sown in July and August. An ounce of seed will sow about 100 feet of drill, and from a pound to a pound and a half will be required for an acre.

PURPLE-TOP STRAP-LEAF. A flat variety of fairly large size; a purple ring which runs about one-third of the way down the root, or at least as far down as the root is out of the soil, indicates the variety. The flesh is white, fine-grained and is superior to most other varieties for table use. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

TURNIPS, continued

PURPLE-TOP WHITE GLOBE. The root is nearly round and only slightly flattened at the top. The purplish color extends well down the sides of the root. It is an early-maturing variety, and the roots keep well after being pulled. A good sort for market or for stock-feeding. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

COW HORN. Commonly called the "Long White" Turnip. It is a very rapid grower, a considerable part of the root remaining above the ground. The flesh is white, fine-grained, and of excellent quality for table use. The Cow Horn Turnip is used largely for stock-feeding and for turning under as a fertilizer in connection with crimson clover. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts., 5 lbs. \$3.25.

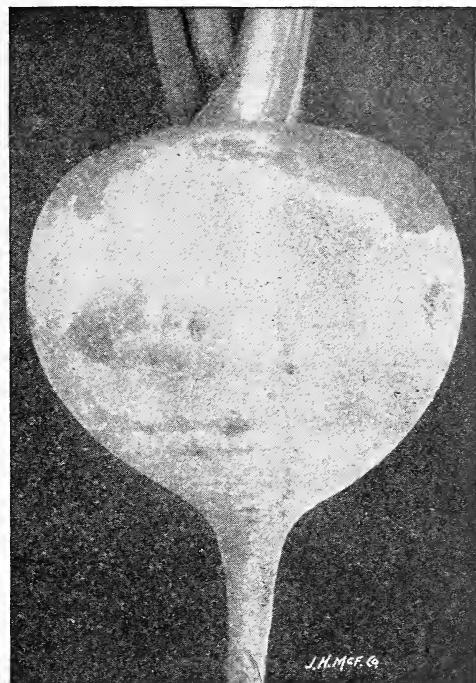
EXTRA-EARLY WHITE MILAN. Probably the earliest of the flat Turnips. Both skin and flesh are pure white; flavor is mild and sweet. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

RUTABAGA, or SWEDE TURNIP

The general cultivation for Rutabagas is the same as for turnips, excepting that for early use the seed should be sown in a prepared seed-bed and the roots transplanted into rows about 2 feet apart and from 8 to 10 inches in the row. For later crop the seed may be sown in the open ground in June and early July. Just before the ground freezes the roots should be dug, the tops cut, and the crop stored in a cold cellar or pit outdoors.

SWEET GERMAN. This variety is very similar to the turnip and is used in many sections for table use as well as for stock-feeding. The flesh is white and solid, and does not have the strong taste of the common turnips. A winter crop can be kept well into the following summer. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

IMPROVED PURPLE-TOP. Frequently called the American Purple-Top and is remarkable for its uniform shape and size. The skin is smooth and almost white, while the flesh is golden yellow. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.



PURPLE-TOP WHITE GLOBE TURNIP

HERBS

Most of the herbs are perennials, and will grow in almost any corner of the garden, but are particularly partial to bright sun.

ANISE. Used principally for flavoring and for garnishing. Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

BALM. Used for making a medicinal tea. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

SWEET BASIL. A highly aromatic herb whose leaves and tops are used for seasonings and, in a limited way, in salads. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

BORAGE. An annual plant that is used freely by bee-keepers. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.75.

CARAWAY. The seeds of this plant are used for culinary purposes, in confectionery and also in medicines. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CORIANDER. An annual whose seeds are strongly aromatic. Pkt. 5 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

DILL. An annual plant, seeds of which are used as a seasoning and also in the preparation of Dill pickles. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.



SWEET MARJORAM

SUMMER SAVORY

THYME

SAGE. An old familiar herb with a pungent odor. Pkt. 5 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

SWEET FENNEL. The leaves are finely cut and are especially beautiful for garnishing. Pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

HOREHOUND. Annual; chiefly used for medicinal purposes, as it has strong tonic properties. Pkt. 5c., oz. 30c., $\frac{1}{4}$ lb. \$1, lb. \$3.

LAVENDER. The flowers are delightfully fragrant, imparting a pleasing odor to the contents of linen-chests. Pkt. 5 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

SWEET MARJORAM. An annual possessing a pleasing fragrance and of particular value as a seasoning. Pkt. 5 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

RUE. A medicinal plant of extremely pungent taste. Pkt. 5 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

SUMMER SAVORY. Annual, cultivated for the foliage, which is gathered in summer and dried for use in the kitchen during the winter months. Pkt. 5 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

THYME. An old-time garden plant, the leaves and young branches of which are used for seasoning. Pkt. 5 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

CURLED CHERVIL. Leaves of Chervil very much resemble those of parsley and are used in a similar way. The foliage is ready for use in from six to ten weeks after sowing the seed. Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

SAFFRON. Cultivated for medicinal purposes, and also for the coloring matter from which comes saffron-yellow dye. Pkt. 5 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

MINT. Leaves are used in making the familiar Mint sauce that is indispensable to spring lamb and green peas. Pkt. 25 cts.

TANSY. A strongly aromatic plant, with medicinal qualities. Pkt. 10 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

NORTHERN-GROWN SEED POTATOES

GROWN ESPECIALLY FOR SEED

For many years we have made a specialty of supplying our trade with northern-grown seed Potatoes, and have enjoyed a largely increased trade from year to year. This we attribute to the fact that our stock is especially grown for seed, by experienced growers in the cold northeast and being pure and true to name, produces a much larger yield, and Potatoes of a much finer quality, than the home-grown and western stocks usually sold in the open market for seed purposes.

We begin shipping Seed Potatoes as early in the spring as weather conditions will permit, usually the latter part of March. However, we urge our customers to place their orders early, while our stock of all varieties is complete, as it frequently happens that we are unable to supply certain varieties late in the season. Owing to the perishable nature of Seed Potatoes the market is subject to radical changes, and it is impossible for us to guarantee prices; therefore, the prices given here are subject to change. Special prices will be quoted on five-barrel lots and upward on request. Each barrel contains 165 lbs. of full-sized tubers. Prices, f.o.b. Pittsburgh.

King of the Russets. A New Late Potato. This Potato is destined to be one of the leading main-crop varieties in that it is an exceptionally heavy yielder, table quality of the very best, and with smooth, velvety, russet skin and shallow eyes. No Potato can surpass it in uniform and handsome appearance. It is very fine-grained, cooks as white as flour, and is of splendid flavor; an excellent keeper and retains its good eating qualities until late in the spring. It is one of the hardiest varieties known and it is not susceptible to rot, scab, or disease; in fact it can be grown on the most heavily manured land without danger of rot. Its great productiveness, handsome color and resistance to diseases make it a very popular Potato and one especially suited to our locality. Pk. \$1, bus. \$3.50, bbl. \$8.50.

EARLY VARIETIES

EARLY SIX WEEKS. A very early Potato, somewhat resembling the Early Ohio. Pk. \$1, bus. \$3.50, bbl. \$8.50.

EARLY ROSE. This is genuine stock of the old standard Early Rose Potato. Although one of the oldest varieties, it still retains its popularity. Pk. \$1, bus. \$3.50, bbl. \$8.50.

EARLY OHIO. A sort that is well known by market-gardeners who are after a first-early Potato for home trade; the tubers are almost round, with pink skin and of excellent quality. Pk. \$1, bus. \$3.50, bbl. \$8.50.

EARLY VARIETIES, continued

IRISH COBBLER. An extra-early, round, white Potato. Vines yield heavily and the tubers are of extremely fine quality. Pk. \$1, bus. \$3.50, bbl. \$8.50.

LATE VARIETIES

CARMAN No. 3. Extra large, oblong, slightly flat, white. Vines are extra-good growers and yield an immense quantity of tubers of uniform size. One of the best late varieties; of excellent quality; good keeper. Pk. \$1, bus. \$3.50, bbl. \$8.25.

SIR WALTER RALEIGH. The tubers vary from round to oblong in shape; uniformly of good size, white-skinned and of excellent quality. A good keeper, and, like Carman No. 3, a very heavy yielder. Pk. \$1, bus. \$3.50, bbl. \$8.25.

RURAL NEW YORKER No. 2. Very popular, handsome and a heavy yielder. Pk. \$1, bus. \$3.50, bbl. \$8.25.

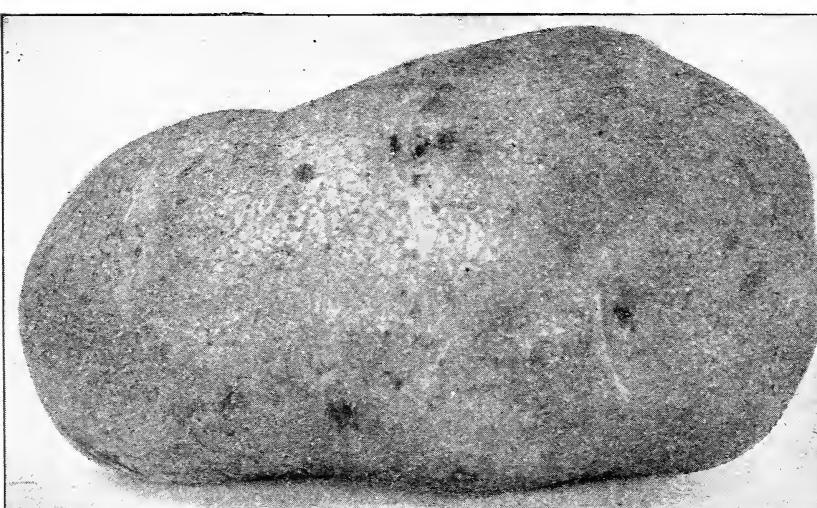
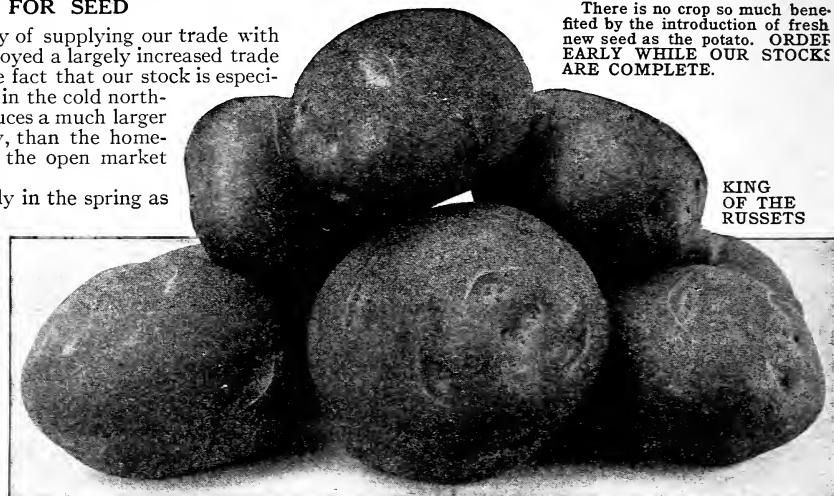
GREEN MOUNTAIN. A medium to late Potato in point of ripening, with branching, light green foliage. Skin white and thin; flesh white. Tubers flattened to oblong in shape; extremely productive and, when thoroughly ripened, of most excellent quality. Pk. \$1, bus. \$3.50, bbl. \$8.50.

Prices subject to change

We recommend Prolific Crop Producer and Columbian Corn and Potato as excellent potato fertilizers. See page 53 for prices. If you are interested in Potato machinery, write for special catalogues giving detailed descriptions of Potato Planters, Potato Diggers, and Potato Cutters.

GREEN MOUNTAIN POTATO

ORDER YOUR SEEDS EARLY—in January or February, rather than in March or April, making sure of your favorite varieties and have them on hand when planting-time comes.



FLOWER SEED DEPARTMENT

We have given a little more than our usual attention to the Flower Seed Department, and for the season of 1918 have made some radical changes in the list. Practically all of the varieties listed here are "Annuals," that is, plants which grow, produce flowers, mature the seed, and die the same year. We believe this class of plants to be more satisfactory, in general, to the average gardener. If one desires perennials, or those plants which live from year to year, we would suggest that the plants themselves be purchased, although a great deal of the pleasure in gardening will be lost if you do not raise the plants from the seed.

ASTERS

No garden can be considered even half-way complete without a good display of Asters. If the gardener cares to go into growing different varieties, he will be able to have flowers early in July, and a succession of blooms will come in August and even to the latter part of October, unless the plants are killed by frost. One would hardly think the magnificent chrysanthemum specimens of the present day can trace their ancestors back to the little China Aster that grew in our grandmother's garden. One who is interested in the history of the development of the Aster will find it a most interesting study.

Asters will grow in almost any reasonably good soil; the bed should be prepared in about the same way as for vegetable crops, but if you give special attention to fertilizing and cultivating the Asters, you will be amply repaid by fine plants, and long stems which will support the enormous blooms. The plants delight in an open, sunny situation. It is advisable to change the location each season in garden culture, for the plants are not altogether successful if set in the same ground two or three years in succession. For early plants and blooms seeds may be started in a coldframe or hotbed, or even in a small window-box in the house, and the little plants may be set into the open ground just as soon as danger of late spring frost is over. For the late flowers you will be just as successful if you sow the seed in the open ground in the early part of May. When plants are 2 or 3 inches high, set them where they are to bloom. If a mass of color is desired, the plants may be set from 9 to 12 inches apart; but if you want extra-long stems for cutting it is advisable to set the plants not less than 12 inches apart, in rows that are at least 2 feet apart.

Asters have some insect enemies, particularly the aphis, which attacks the root, and stem-rot, which causes the stem to decay just at the surface of the ground. If the soil has been well fertilized, and the plants kept growing rapidly, you will have comparatively little trouble from either of these pests. Should they occur, sprinkling wood-ashes or air-slaked lime over the entire surface of the bed will help to eliminate the trouble. The Aster beetle is a small black insect which attacks the flowers; it can best be destroyed by hand-picking or knocking into a mixture of kerosene oil and water.

Simple's Branching. Extra-fine late Aster. The flowers are borne on long, stiff stems which often measure 2 feet or more in length. The flowers are extra large, with heavy, incurved petals. Our seed is from a selected strain of these famous Branching Asters and we can recommend it as being the very finest seed that can be secured. Our collection includes the following colors and mixtures:

Simple's Branching, White. The flowers are pure white. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1. oz. \$1.75.

Simple's Branching, Blue. A rich shade of dark blue. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Simple's Branching, Rose. An extremely delicate shade of light rose. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Simple's Branching, Crimson. A deep, glistening crimson. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Simple's Branching, Mixed. All the above colors. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

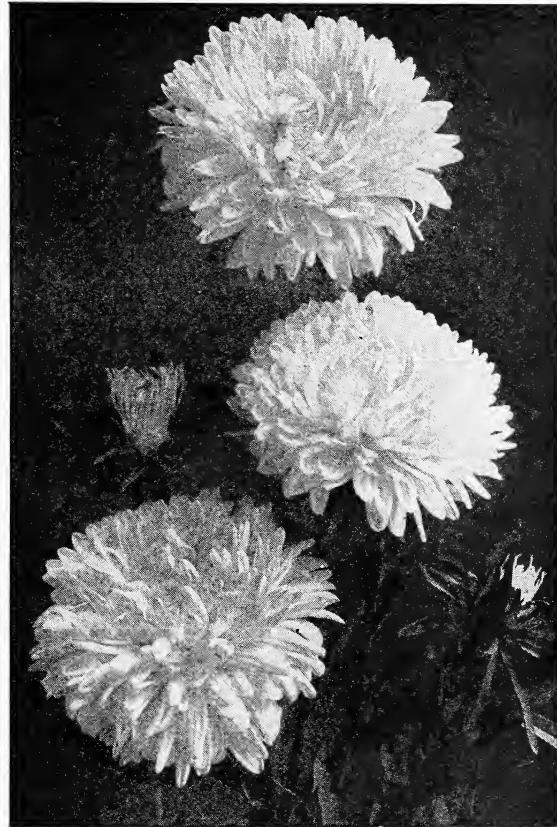
Queen of the Market. Mixed colors. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

AGERATUM

A low-growing plant, mostly used for edging of beds or for mass planting. For early flowers sow the seed under cover from March until May; for later blooms sow the seed out-of-doors in May or early June.

Blue Perfection. An unusually deep blue flower, really remarkable in its coloring. The heads are quite large and freely produced. The plants grow about 15 inches high. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Dwarf Blue. A low-growing plant, seldom over 10 inches. Flowers are deep blue. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



SEMPLE'S BRANCHING ASTERS

ALYSSUM

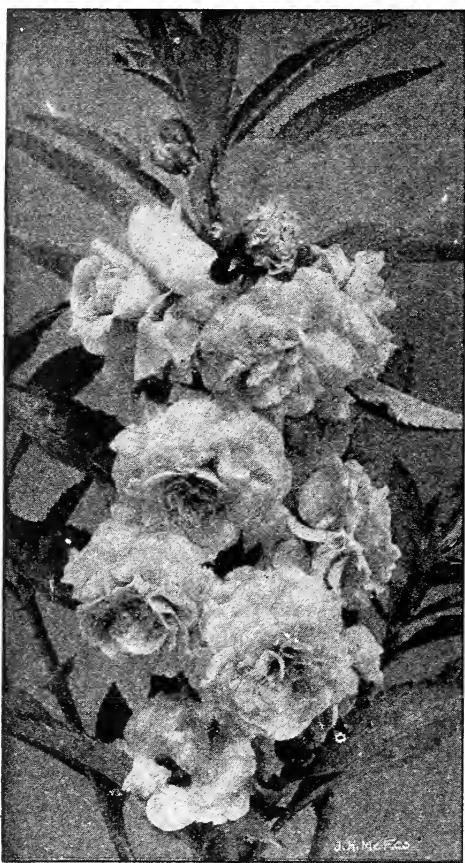
A popular flower for the edges of beds or planting in vases and rockeries. The plants will remain in bloom practically the whole season.

Sweet (Benthami). The popular old-fashioned variety. Flowers pure white. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Benthami compactum. Known as the "Little Gem" Alyssum. The plants are dwarf, not over 6 inches in height, and most compact in habit. The flowers are pure white, extremely fragrant and borne in great profusion throughout the entire season. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 40 cts.

For Garden and Landscape

The rustic atmosphere desired in your garden or landscape can be secured easily by the addition of a few colonies of honeybees. See pages 146-147.



DOUBLE BALSAM

AMARANTUS

These plants are extremely striking on account of the markings of the foliage. Both plants and leaves will grow to a large size in rich soil, but the color will not be quite so bright as in poorer soil. Seed can be sown in the house or hotbed in early spring, or in the seed-bed in the garden later on and the plants transplanted where they are to stand during the season. This is a valuable plant for bedding and producing decorative effects in the garden.

Tricolor. The common name is "Joseph's Coat." The foliage is brilliantly marked with green, red and yellow. Excellent for producing contrast with green-foliage plants. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

BALLOON VINE

Rapid-growing annual climber. Often called "Love-in-a-Puff." The flowers are quite small, pure white and are well filled with curiously-formed seed-pods. The plants are sometimes grown in pots for verandas and ornaments. It is a valuable climber for porches where dense shade is not desirable; very unique and interesting. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

BALSAM

Everyone knows this plant by the old familiar name of "Lady's Slipper." Seed may be sown in the house or in sheltered spots in the garden. When the seedlings are 1 to 2 inches high, transplant them so that they may be 5 to 6 inches apart; after they have made a reasonable development they should be transplanted to their permanent places in the garden, letting them stand at least 1 foot apart.

Double Varieties, Mixed. This is a mixture made up from the finest camellia-flowered sorts, and contains an assortment of colors from clear white to the deepest blood-red. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

BEGONIA

The Begonia is one of the most attractive and delightful perennials, either for window-boxes during the winter or for bedding plants during the summer. Produces large masses of variously colored flowers with bronze and green foliage.

Vernon. A charming free flowering and highly effective variety with blood-scarlet flowers and bronze-colored foliage. Pkt. 25 cts.

Vulcan. Flowers brilliant dark scarlet. Dark foliage. A splendid variety. Pkt. 25 cts.

Mixed Everblooming varieties. Pkt. 25 cts.

CALENDULA or POT MARIGOLD

Hardy annual about 1 foot high. Sow in open ground early in spring. The plants will bloom early in the summer and continue until frost.

Double Mixed. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

CALLIOPSIS

These are well-known garden plants, the tall-growing varieties being especially good for mass planting. The dwarf sorts are superb for making color edging for beds or for planting in pots for decorative purposes.

Dwarf Varieties, Mixed. This collection includes shades of yellow, deep crimson, yellow with bronze center, and other combinations. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

CANARY-BIRD VINE

A species of *Tropaeolum* that makes an excellent annual growth. The flowers are brilliant yellow, and some people imagine that they resemble a bird with half-expanded wings. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

ORDER YOUR SEEDS EARLY AND AVOID THE RUSH

CANDYTUFT

For many years these plants have been highly prized for mass planting, or for the border of walks and flower-beds. Sow the seed in the garden where the plants are to stand; after they are up, thin out plants so that the remainder may have plenty of room to develop.

Giant Empress. One of the finest of the family; the flowers are extra large, both in size of the truss and of individuals. The color is pure white. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

CANNAS

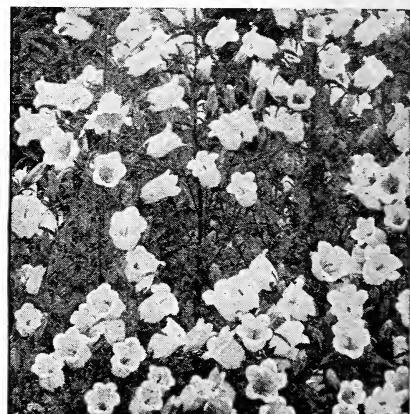
The old-fashioned name of these tall-growing plants is "Indian Shot." As a general rule they are raised from the roots, but there is a great deal of pleasure in starting the little plants from seed, and there is practically no difficulty in securing good specimens. Before planting the seed, it is well to file or scrape the sharp edge and then place the seed in damp moss; the outer shell is extremely hard and unless an opening is made the seeds are not likely to germinate. Set out as soon as started.

Large-flowered Dwarf Varieties, Mixed Colors. The seeds are saved from some of the most brilliantly colored plants, and include deep reds, yellows, and red and yellow striped and shaded. Pkt. 10 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

CANTERBURY BELLS

The "Campanulas," "Blue Bells," or "Canterbury Bells," as these plants are variously known, produce large, bell-shaped flowers of varying colors; some are clear white, others dark blue, others have shades of red. They are especially effective when planted in masses, and the seed may be sown from the first of June to the first of September. The plants should be protected with leaves or straw during the winter months.

Single Varieties, Mixed Colors. A mixture of the large-flowering varieties, containing white, pink and blue sorts. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



SINGLE CANTERBURY BELLS

CARDINAL CLIMBER

A strikingly beautiful early-flowering species with exceedingly ornamental, deeply laciniated foliage and large brilliant deep cardinal-red flowers. Pkt. 25 cts.

MARGUERITE CARNATIONS

These plants, which bloom in three to four months after sowing the seed, are really the most satisfactory of the "Pinks." The flowers are large, quite fragrant and useful for cutting.

Mixed Colors. The mixture includes yellow, scarlet, white, pink, and variegated. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

CASTOR BEAN

The Castor Beans are extremely large annual plants, that may be used for ornamental hedges, for the center of beds of cannae and other tall-growing plants.

Ricinus Zanzibarensis. The Zanzibar Castor-Oil Plant is a new and distinct sort. The leaves are enormous, often 2 to $2\frac{1}{2}$ feet across, and the plants frequently reach 12 feet in height. Pkt. 5 cts., $\frac{1}{2}$ oz. 10 cts., oz. 15 cts.

Finest Varieties, Mixed. The mixture includes seeds of the best-known and most satisfactory named varieties. Pkt. 5 cts., $\frac{1}{2}$ oz. 10 cts., oz. 15 cts.

CLARKIA

An annual plant that has been greatly improved during recent years. The plants do well in sun or in shade, and under ordinary conditions will grow from 2 to 3 feet in height.

Elegans fl.-pl. The flowers of this variety are full-double and of the finest mixed colors. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

COREOPSIS

No flower is longer in bloom during the whole season than Coreopsis. It is a most excellent cut-flower, lasting well. Color bright yellow; flowers large and showy. Hardy perennial, easily grown from seed. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



COREOPSIS

CELOSIA CRISTATA

The Crested Cockscombs produce large, brilliantly colored, comb-like heads. Most useful when planted in masses or used for the borders of large beds.

Finest Mixed Colors. The varieties in this mixture are of various shades of orange, red and yellow. Pkt. 5 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

CENTAUREA

Cyanus. Variously known as the "Ragged Sailor," "Bachelor's Button," or "Cornflower." The plants are from 8 inches to 2 feet high, and will bloom in almost any situation. Various colors in mixture. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Imperialis. This is one of the large-flowering Sweet Sultans, and probably the finest of all the class for cut-flowers. The blooms are very fragrant, borne on long stems and are of various colors and markings, including crimson, pink, purple, violet, and lilac. **Mixed Colors.** Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

CHRYSANTHEMUMS

Carinatum hybridum. These are double annual sorts, of the finest mixed colors. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

COBAEA SCANDENS

An annual climber of extremely rapid growth. The flowers are purple, bell-shaped, from $1\frac{1}{2}$ to 2 inches across and fully 2 inches in length. Plant the seed in damp soil, pressing down lightly. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

COLEUS

Ornamental-leaved bedding plants that are extremely effective when used as border plants or when used in formal bedding.

Hybridus. A strain of finely colored plants that may be used for the garden or house culture. Easily raised from seed. Pkt. 25 cts.

COLUMBINE

The botanical name of these plants is "Aquilegia." The plants and flowers are especially effective when planted in a damp situation. Seed may be sown in the open ground; as the plants are perfectly hardy they will not require protection, and will form large clumps.

Finest Varieties, Mixed. A mixture of named sorts, including the common yellow and scarlet Columbine, as well as some of the extra-long-spurred varieties. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



LADY LENOX COSMOS

COSMOS

For fall blooming no plant is superior to the Cosmos. The specimen plants grow very large, have delicately cut foliage, and will produce hundreds of blooms from the first of September until killed by frost. Sow the seed in the house, or in hotbed, in early March if possible, certainly not later than the middle of May; transplant to the open ground, setting the plants from a foot to 18 inches apart.

Mammoth Lady Lenox. A variety with enormous blooms of a delicate shell-pink. This is, without doubt, the finest Cosmos ever produced, and has created a sensation wherever seen. Splendid for cutting, as the flowers will remain fresh for some time. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Early-flowering, Mixed. The large-flowered varieties are included in this mixture; the colors are white, pink, red, and crimson. Pkt. 5c., $\frac{1}{2}$ oz. 25c., oz. 45c.

Mammoth Fine, Mixed. Excellent for cutting. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 40 cts.

CYPRESS VINE

A graceful climber, with scarlet and white flowers which are produced in great profusion. The foliage is finely cut and especially useful in ornamental designs. The seed should be soaked in warm water before sowing.

Mixed Colors. We have two varieties in this mixture—white and scarlet. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

SHASTA DAISY

A hardy perennial which produces pure white flowers with a yellow center. The blooms will open from $2\frac{1}{2}$ to 4 inches in diameter, and are borne on long, stiff stems. They will remain fresh for two weeks or longer. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1, oz. \$1.75.

DAISY

These are the old-fashioned English Daisies. The seed should be sown very early in the spring, and when the plants are of sufficient size transplant to the border, setting them about 6 inches apart.

Double Varieties, Mixed. A mixture of the best imported seed, producing flowers from pure white to deep crimson. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.50

DAHLIAS

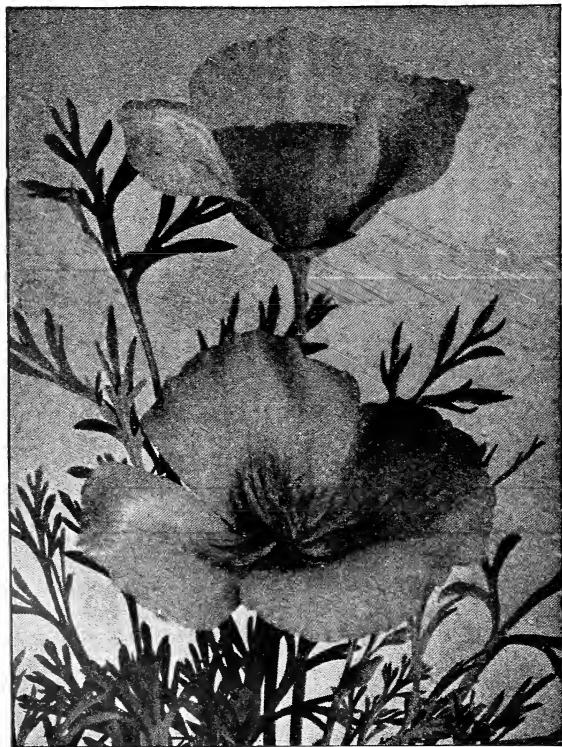
It is a very easy matter to raise Dahlias from seed, provided the seed is started early in the spring in the hotbed or in a sunny window in the house. The plants may be set outdoors after danger of spring frost is over.

Double Varieties, Mixed. Some of the best named sorts are included in this mixture, and we feel sure you will be pleased with the results that you obtain from the plants raised from seed. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.40.

EUPHORBIA

These are very showy ornamental plants growing about 2 feet in height. They can be raised without difficulty from seed.

Variegata. Commonly called "Snow-on-the-Mountain." Leaves deep green, marked with white. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.



ESCHSCHOLTZIA

ESCHSCHOLTZIA

The plant is much better known under its common name of California Poppy. It is a hardy annual, with finely cut foliage, and usually is in bloom from June until frost. The flowers are large, somewhat like the poppy in shape, and of the most brilliant colors. The plants are about a foot high, and are desirable for borders or large beds.

Mixed Colors. The plants from this mixture produce flowers of deep golden yellow, rich crimson, orange, carmine, rose and various shade combinations. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 40 cts.

FORGET-ME-NOT

The Forget-me-not, or *Myosotis*, is a biennial, but it will bloom the first season from seed. If the seed is sown in the spring, flowers may be expected in early fall. If spring-flowering plants are desired, sow the seed in the open ground in July and transplant the seedlings about the middle of September. Pkt. 5 cts., $\frac{1}{2}$ oz. 1, oz. \$1.75.

FOUR O'CLOCK

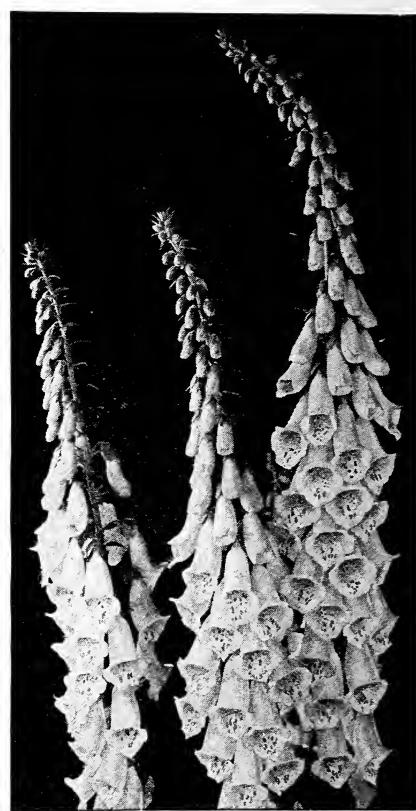
The flowers are the old-fashioned "Marvel of Peru." Open about four o'clock in the afternoon, remaining open during the night, and shut the next morning. The plants are about 2 feet high, with plenty of brilliant foliage and many fragrant flowers in varying colors. If the plants are set about a foot apart they will make an effective hedge.

Mixed Colors. The colors include white, violet, deep red, crimson and scarlet. Many of the flowers are beautifully striped and splashed. Pkt. 5c., $\frac{1}{2}$ oz. 10c., oz. 15c., $\frac{1}{4}$ lb. 50c. lb. \$1.50.

FOXGLOVE

The long, thimble-shaped flowers of the *Digitalis*, or Foxglove, are particularly effective when the plants are grown in masses. The flower-stems are at least 3 feet in height and are covered the greater part of their length with buds which open from the base clear to the tip of the stem. Immediately after blooming, remove the flower-stalk clear to the ground, and crop some of the large leaves; this will result in a number of new plants which start from the old crown and will produce flowers the next year.

Mixed Colors. White, purple and various shades. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



FOXGLOVES

GAILLARDIA

The Blanket Flowers, as they are frequently known, are extra-good bedding plants. The flowers are large and showy, and are produced throughout the whole summer. Protect during the winter.

Grandiflora. A perennial variety which may be kept in the garden for several seasons. The flowers are exceptionally good for cutting; the varying colors are orange-yellow, crimson and scarlet. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

GOURDS

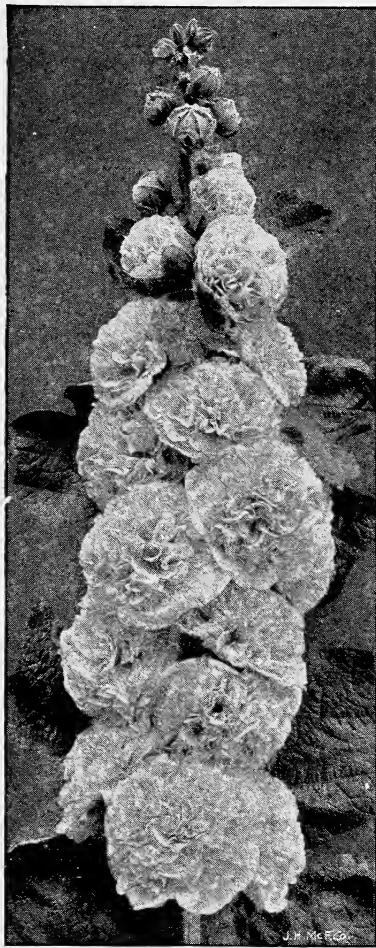
The ornamental Gourds are useful for covering old fences and stumps, or training over trellis or summer-house.

Dish-Rag. Sometimes called the Sponge Gourd. When the fruit is ripe the inside looks very much like a sponge or fibrous cloth. Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

Dipper. If you have ever traveled through the country you have seen this Gourd hanging by the "old oaken bucket." Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

Mixed Varieties. This mixture contains the two preceding varieties as well as others of the Gourd family. Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

Ornamental, Mixed. The finest varieties. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.



DOUBLE HOLLYHOCKS

GOMPHRENA

The Globe Amaranth, as this plant is commonly called, produces button-like flowers which are fine for cutting. It is one of the "Everlasting" flowers, and the blooms may be cut and dried for winter ornaments.

Various Colors in Mixture. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

GYPSOPHILA

"Baby's Breath" is a feathery plant with little star-shaped flowers used in making up bouquets. Grows easily in every garden. 2 to 3 feet high.

Elegans, White. Pkt. 5c., $\frac{1}{2}$ oz. 10c., oz. 15c.

HELICHRYSUM

The "Straw Flower" is one of the best of the so-called "Everlastings." The flowers are from 2 to 3 inches in diameter, borne on long stems.

Monstrosum, Double Varieties, Mixed.

An assortment of colors, including reds, yellows and orange. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HELIOTROPE

A familiar plant, principally grown on account of the delightful fragrance and foliage. Can be grown either in pots for the house or in the garden.

Extra-Fine Mixture of Dwarf Varieties.
Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

HELIANTHUS PURPUREUS

The true Red Sunflower, ranging in color from light rose to the deepest purple-red. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

HOLLYHOCK

Where tall-growing plants are required there seems to be nothing that surpasses the Hollyhocks. The plants will average 5 feet in height, and in good soil and situation will bloom freely during the summer. Seed is usually sown in July or August, and if the little plants are protected during the winter with a mulch of straw or leaves, flowers may be expected from these plants the following summer.

Finest Double Varieties, Mixed Colors.

This is a collection from some of the finest named sorts, and the colors include white, yellow, pink, red, and deep maroon. Pkt. 10 cts., $\frac{1}{2}$ oz. 50 cts., oz. 90 cts.

HOP

The Japanese Hop, or *Humulus japonicus* is a rapid annual climber. The foliage resembles that of the common Hop, but is thicker and grows more freely, forming a denser screen. The plants will grow almost anywhere and will stand heat and dry weather. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Foliis variegatis. Similar to the above, excepting that the leaves are variegated with white. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

HYACINTH BEAN

A rapid-growing climber, bearing many flowers which are followed by brilliant purple seed-pods. Sow the seed where the plants are desired, selecting a warm, dry spot, if possible. A splendid vine for the porch where deep shade is not desirable.

Dolichos Lablab, Mixed Colors. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

ICE PLANT

A half-hardy annual, with tender almost transparent leaves and branches. On account of its drooping habit it is valuable for basket and vase planting. Also fine for edging beds of geraniums, cannas, and other bedding plants. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

JOB'S TEARS

An ornamental grass which grows from 2 to 3 feet high, and bears large, ivory-white seeds, from which it gets its name. The children enjoy making necklaces of the hard seeds. Pkt. 5 cts., $\frac{1}{2}$ oz. 10 cts., oz. 15 cts.

KOCHIA

An ornamental hedge plant, familiarly known as "Summer Cypress." Plants grow about 2½ feet in height, with the branches close to the main stem, giving it a form similar to that of a clipped evergreen. During the summer the foliage is bright green, but in September the color changes and in the course of a week or two the whole plant is a solid ball of crimson. Sow the seed in the open ground about the middle of May, thinning the seedlings so that they will stand about 2 feet apart. Transplanting also may be resorted to, and the plants grown in any part of the garden. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25c.

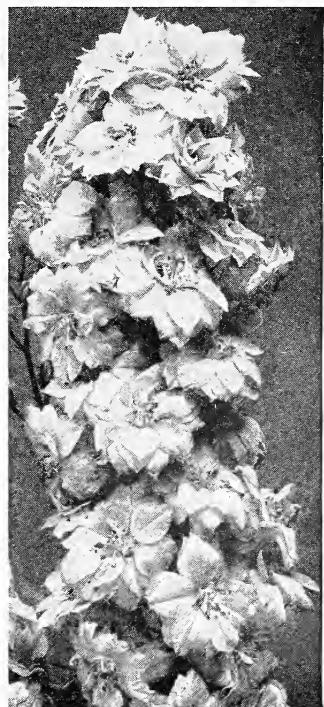
LARKSPUR

The annual Larkspurs are free bloomers, producing long spikes of flowers in many varying colors. Seed may be sown in early spring, and the plants should be set about 8 to 10 inches apart. These are as beautiful as the perennial Larkspurs, or Delphiniums, and their spikes of flowers standing up stiffly among the leaves of other plants make a most beautiful effect.

Double Dwarf Rocket, Mixed Colors.
Plants grow about 1 foot in height. The colors include light and dark blue, violet, white, pink and rose. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

LOBELIA

Crystal Palace compacta. Rich dark blue; dark foliage; extra fine. Pkt. 5 cts., $\frac{1}{2}$ oz. \$2.25, oz. \$4.



DOUBLE DWARF LARKSPURS



MARIGOLD

MARIGOLD

The African Marigolds grow considerably taller than the French varieties. If the seed is sown in a coldframe in the spring, the young plants must be transplanted where they are to remain; therefore it is less trouble to sow the seed in the open border and thin the plants until they stand from 8 to 10 inches apart.

African Double Varieties, Mixed Colors.
Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.



MIGNONETTE

MIGNONETTE

The Sweet Mignonette may be grown at any time of the year, for the seeds may be sown in pots in the house or in the open ground. If the plants are set in a cool, shaded place they will continue to bloom all through the fall.

Sweet (*Reseda odorata grandiflora*). Pkt. 5 cts., $\frac{1}{2}$ oz. 10 cts., oz. 15 cts.
Golden Machet. Pkt. 5c., $\frac{1}{2}$ oz. 20c., oz. 35c.



JAPANESE MORNING-GLORY

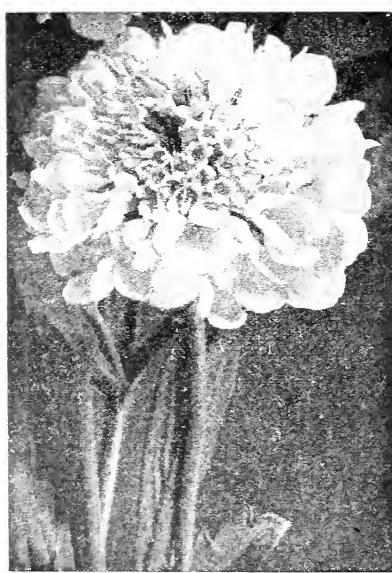
MIMOSA PUDICA

Commonly called the "Sensitive Plant"; the leaves will close up when touched. Start the seed under glass and do not set the plants in the open ground until the weather is thoroughly warm. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

MOONFLOWER

Rapid-growing climbers that succeed best if the seed is sown in a hotbed and transplanted once or twice before setting in the open ground.

Ipomea grandiflora alba. The true Moonflower. The flowers are clear white and from 3 to 4 inches in diameter. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.



MOURNING BRIDE

MIMULUS

These plants are variously known as "Musk Plants" and "Monkey Flowers," so called from the resemblance of the flower to a mask or face. They are very good for baskets, vases or house culture.

Moschatus (Musk Plant). Leaves musk-scented; bears small yellow flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

MOMORDICA

These plants really belong in the Gourd family, as they are rapid-growing climbers, producing ornamental fruit and foliage that is dense enough to make a pleasing shade.

Charantia (Balsam Pear). Is grown by the Chinese under the name of La-Kawa. Fruit is edible and is usually prepared by boiling before it is fully ripened. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

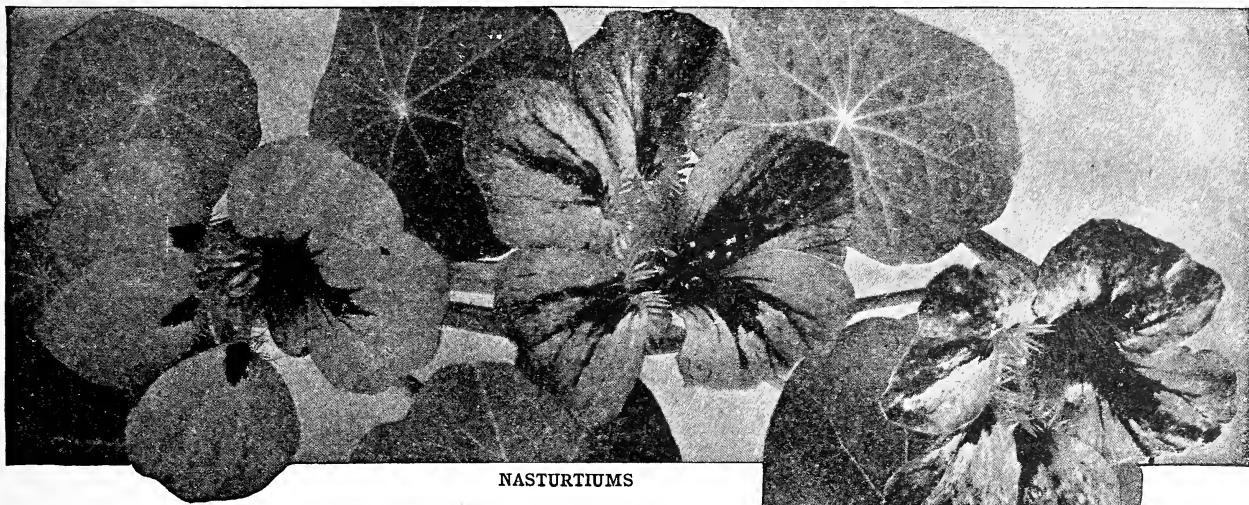
Balsamina (Balsam Apple). A more slender and graceful climber than the Balsam Pear. The flowers are yellow, with a blackish center, followed by an orange-colored fruit, from $2\frac{1}{2}$ to 3 inches long. Often used for medicinal purposes. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

MORNING-GLORY

Exceptionally good plants on account of their rapid growth and frequency of bloom. The seeds germinate quickly and readily, and may be sown anywhere the plants are to remain during the season.

Fine Varieties, Mixed. This mixture is from seeds of the common Morning-Glory. The colors in the mixture are white, light and dark blue, carmine, bright red, violet and variegated. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

Giant Japanese. A strain of Morning-Glories with extra-large flowers, often from 4 to 6 inches across. The colors vary from clear white to deep blood-red, white with pink throat, mauve with a white throat, and many other exquisite shadings and markings. Sold only in mixed colors. Pkt. 5 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.



NASTURTIUMS

MOURNING BRIDE

An old-time garden flower properly known as "Scabiosa." The flowers are borne on long stems and are beautiful either in the garden or when cut for bouquets. The plants are from 12 to 18 inches high.

Mixed Colors. White, yellow, crimson, scarlet, maroon and delicate pink will be found in this mixture. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

NASTURTIUMS

Few annual flowers give such general satisfaction as the Nasturtium, and undoubtedly there are no flowers of easier cultivation. They require only moderately good soil, for if the plants are grown in rich soil there is quite likely to be a dearth of blossoms and an abundance of foliage. The plants endure hot, dry weather and will give their brilliantly colored blossoms all through the season.

Dwarf Varieties, Fine Mixed Colors.

The Tom Thumb Nasturtiums are used for making masses of colors. The flowers vary in color from a delicate pink and primrose, to deep crimson-maroon, so dark that the appearance is almost black. Pkt. 5 cts., oz. 10 cts., $\frac{1}{4}$ lb. 30 cts., lb. \$1.

Tall Varieties, Fine Mixed Colors. The tall Nasturtiums are used for covering trellises and railings, or may be grown over rockwork with fine effect. The colors vary fully as much as in the dwarf sorts. Pkt. 5c., oz. 10c., $\frac{1}{4}$ lb. 30c., lb. \$1.

NICOTIANA

Annual plants, growing about 3 feet high, with delicate, fragrant flowers.

Affinis. Easily grown from seed. In the evening and early morning the plants are loaded with large white, pink-tinged flowers, which are deliciously scented. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

Sanderæ. Pkt. 10c., $\frac{1}{2}$ oz. 25c., oz. 45c.

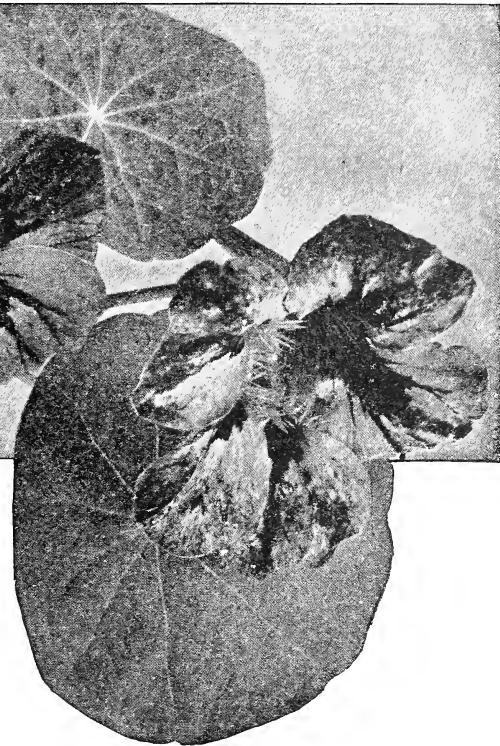
PANSY

Everyone knows the Pansy; the beautiful, brilliantly colored blossoms are favorites in every garden. The seed should be sown in April or early May, for the plants will grow and bloom much better in the cool days of the early spring than in the hot days of summer. In spring, of course, the plants must be sown in hotbeds or in the house, and plants transplanted to the garden. If blooming plants are wanted for the fall, the seed may be sown about the middle of July, in a cool, shaded place, and the plants transplanted as soon as they are of the proper size. Seed sown in August or early September will give extra-early spring-blooming plants, provided some protection is given to the bed during the winter months. This can readily be done with a coldframe or by covering the plants with strawy manure, leaves or litter of any kind.

Finest Mixed Colors. This mixture of the choicest English and American varieties will give many beautiful colors. Pkt. 5 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.50.

Cassier's Giant, Mixed Colors. Some of the most beautiful blotched varieties are included in this mixture. The flowers are extra large and of the most gorgeous colorings. They are borne profusely, each flower having a strong, stiff stem. Pkt. 20 cts., $\frac{1}{2}$ oz. \$4, oz. \$7.

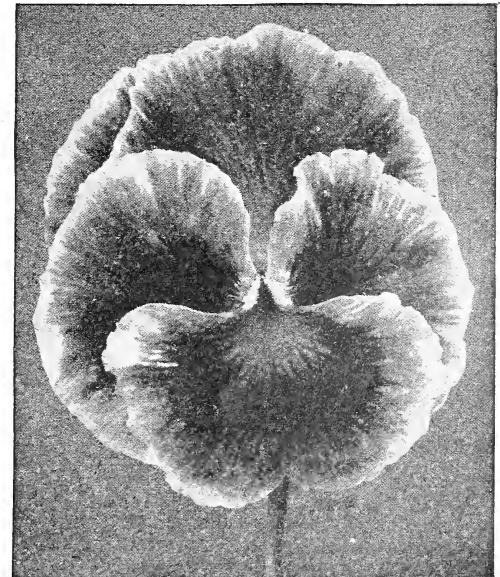
Trimardeau. These Giant French Pansies are the finest that come into our country. The colors vary from soft lavender-blue to deep purple, and from pure white to mahogany and gold. Pkt. 10 cts., $\frac{1}{2}$ oz. \$2.75, oz. \$5.



PANSY

Perfectly hardy climbers that will live from year to year. The plants grow from 5 to 6 feet high and are covered with a multitude of blossoms.

Mixed Colors. Including red, rose and white. Pkt. 5c., $\frac{1}{2}$ oz. 30c., oz. 50c.



PANSY

PETUNIA

If a reasonable amount of care is used in sowing Petunia seed there will be no trouble in getting a fine start of plants. The seeds are extremely small, and, therefore the soil must be well fined or pulverized; sow the seed carefully on the surface of the soil, then press the soil very lightly with a smooth board; sometimes a very light coat of sand is sprinkled over the surface. Seed sown in coldframe in early spring will usually produce flowering plants in June.

Dwarf Inimitable. The plants are seldom more than 7 inches high and are covered with single flowers, some of which are striped, as well as showing almost solid colors. Pkt. 5 cts., $\frac{1}{2}$ oz. 75c., oz. \$1.25.

Rosy Morn. Flowers are soft carmine-pink, with white throat. Very effective for border planting. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1. oz. \$1.75.

Single Varieties, Fine Mixed Colors. This mixture of Petunia seeds will give a magnificent show of blooms all summer. Flowers are of all colors and shades. Pkt. 5 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Double Fringed. Somewhat of a novelty in that the petals are curved and crinkled, giving the flowers a peculiar appearance. The mixture contains white, rose, red and various shades. Pkt. 25 cts.

PHLOX DRUMMONDI

One need have no fear in planting good Phlox seed, for the seed will germinate under almost any condition. The seed may be sown in the open ground in early spring, or may be started in hotbed or coldframe if extra-early blooming plants are desired. If the seedlings are transplanted from the coldframe they should be about a foot apart.

Finest Colors. Mixed. It is almost impos-

PHLOX DRUMMONDI, con.

sible to describe the range of colors in this mixture; there are dark purple flowers with a white eye, rose-colored flowers with white centers, brilliant scarlet, pure white and light yellow. Pkt. 5 cts., $\frac{1}{2}$ oz. 65 cts., oz. \$1.

Nana compacta. These are dwarf-growing plants, desirable for edging and for ribbon beds. Usually grow from 6 to 8 inches in height. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.

PINKS

The Chinese and Japanese Pinks, or Dianthus, as they are technically known, are glorious garden flowers. They will make a magnificent showing when massed in beds, or can be used as specimen plants if one desires. Seed sown in March or April will give blooming plants about the first of July.

Chinese or Indian, Mixed Colors.

All varieties in this mixture are double-flowered and contain wide range of coloring. Pkt. 5c., $\frac{1}{2}$ oz. 40c., oz. 75c.

Japan Single, Mixed. Improved extra-fine mixed. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

POPPY

Very showy garden flowers, probably the most gorgeously colored of any of the annuals. Sow the seed where the plants are to stand, and thin out the seedlings so that the remaining plants may have room to develop; on account of the long tap-root it is not practicable to transplant Poppies.

Shirley. Probably the most showy of the



SINGLE PETUNIAS

POPPY, continued

single-flowered Poppies. The colors have a wide range from delicate pink to deep carmine, and from white to brilliant crimson. Pkt. 5 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

The Tulip. A distinct variety in the Shirley type. The flowers are vivid scarlet and are extremely beautiful. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Double-flowered Mixed Colors. Many of the most beautiful, double-flowered Poppies are included in this mixture. Some of the varieties come from the finest new sorts. Pkt. 5 cts., $\frac{1}{2}$ oz. 15c., oz. 25 cts.

Iceland, Mixed. A graceful delicate variety, 12 inches tall, with white, orange and yellow single blossoms, the petals resembling crumpled tissue paper. The plant is low and compact, excellent for cutting. Sow in the fall, where plants are to remain, and thin. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Orientale. The large Oriental Poppy. A hardy plant bearing large, brilliant crimson flowers with a black blotch on each petal. Very showy and attractive. 2 $\frac{1}{2}$ feet tall. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

PORTULACA

If you have an extremely hot and sunny place in the garden, plant Portulacas. They will stand almost any amount of heat and will continue to grow and bloom throughout the whole summer. The plants are of a low growth and spreading habit. Sow the seed in the open ground when the weather is warm. The plants can be moved when they are in full flower, and make delightful borders to beds of other flowers.

Single, Mixed Colors. Almost all the colors of the rainbow are included in this mixture. Pkt. 5c., $\frac{1}{2}$ oz. 30c., oz. 50c.

Double, Mixed Colors. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.75.



PHLOX DRUMMONDI



SALVIA SPLENDENS

PRIMULA

The old familiar Cowslip that grows in damp places belongs to the Primula family, although it is not cultivated for its blossoms. The seeds included in the mixture that we offer should be sown under glass and the seedlings transplanted to the garden in the early spring. The plants are perennials, but should have slight protection during the first winter. They bloom profusely and keep up a continuous succession of flowers all summer.

Fine Varieties, Mixed Colors. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.75.

PYRETHRUM

Hardy perennial plants of the very easiest culture. Seed may be started under glass or sown in the open ground. Early plants usually begin to bloom in June, and if the flower-stems are cut, a second lot of flowers may be had in the fall.

Double White (Feverfew). Large, clear white flowers that make a splendid showing in the garden. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Golden Feather. Foliage yellow. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

RHODANTHE

An annual plant desirable for the garden or pot culture. This is one of the so-called "Everlastings," and if the flowers are cut and dried they may be retained for winter decorations. Cut the flowers with long stems and hang inverted in a dry, dark place. This will preserve their colors.

Mixed Colors. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

SALPIGLOSSIS

An old-time garden flower that ought to be planted in all modern gardens. It is peculiarly distinct in its markings, the flowers being red, tinted with delicate and beautiful colors. The flowers are grouped on long stems and are desirable for cutting.

Dwarf Varieties, Finest Mixed Colors.

All the rich, velvety colors of the Salpiglossis are shown in this mixture—purple, crimson, rose, white, etc. Pkt. 5 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.

SALVIA

The Scarlet Salvia, or Flowering Sage, makes a brilliant bedding plant, blooming from the middle of July until the plants are killed by the frost. An effort should be made to secure early plants, and therefore the seed should be sown indoors or in a coldframe sufficiently early in the spring so that you may secure plants to set in the garden during the month of May.

Splendens. The true Flowering Sage, with extra-large, brilliant scarlet blossoms. Keeps up a blaze of color until fall. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

Bonfire. Also known as "Clara Bedman." No other Salvia equals it for mass planting; brilliant, dazzling scarlet. Pkt. 10 cts., $\frac{1}{2}$ oz. \$2, oz. \$3.50.

Dwarf Zurich. Very early and compact, with large brilliant spikes. Pkt. 10 cts., $\frac{1}{2}$ oz. \$2, oz. \$3.50.

SNAPDRAGON

Another old-time favorite found in gardens everywhere. The plants are usually from 2 to 3 feet high and well covered with blooms all summer. The peculiarity of the plants is that they bloom best and longest when planted in poor soil. Sow the seed outdoors where the plants are to stand, and thin out the seedlings to about a foot apart.

Large-flowering Tall Varieties, Mixed Colors.

In this mixture you will find crimson, deep scarlet, rose, yellow, white and striped flowers. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

STOCKS

Ten Weeks Stocks are annual plants, have fine foliage and beautiful flowers; not only may one have Stocks in the garden, but plants may be taken up in the fall, potted, and carried over the winter in the house and will bloom almost as freely as out-of-doors.

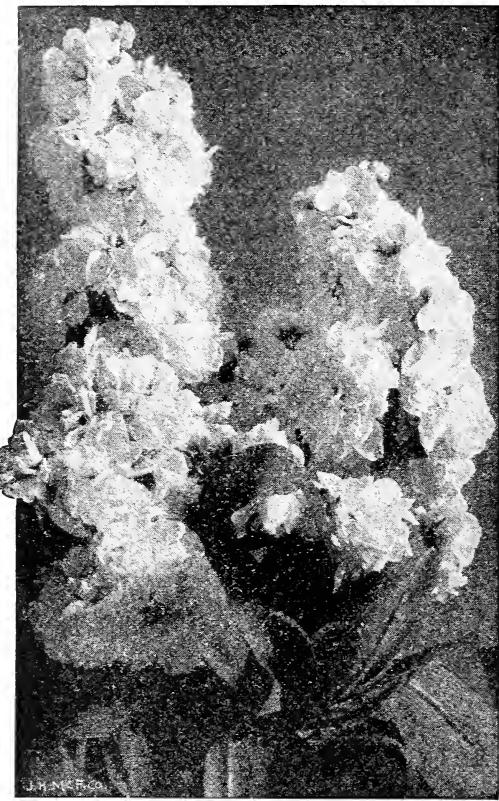
Dwarf German. Strong-growing plants that will produce a multitude of blooms. The seeds have been saved from field-grown specimens, and includes an assortment of many colors. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.25.

For Garden or Landscape

The rustic atmosphere desired in your garden or landscape can be secured easily by the addition of a few colonies of honeybees. See page 146.



SALPIGLOSSIS



DWARF GERMAN STOCKS (see page 43)

WALLFLOWER

These are perennial plants, but in northern climates require some protection during the winter. As a general thing it is better to lift the plants in the fall and carry them over in a coldframe during the winter. The flower-stalks are fine for home decoration. Plants may be also potted and taken indoors for winter flowers.

Double Varieties, Mixed Colors. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.25, oz. \$2.50.

ZINNIA

The old-fashioned flowers of this plant have been so far surpassed by the new varieties that they seem to belong to an entirely different family. Seed sown almost anywhere in the garden will produce strong plants which will give plenty of blooms from early summer until late autumn. For extra-fine specimens plants should be set from 12 to 18 inches apart.

Elegans, Dwarf Varieties, Mixed. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Elegans, Tall Varieties, Mixed. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

FARMOGERM

Ask for Farmogerm for Garden Peas and Beans and Sweet Peas. It will greatly increase the yield and size of both vegetables and flowers, and the expense will be so slight as to be hardly worth mentioning. One trial will be sufficient to convince you of its merits. Put up in 50-cent packages, enough for a quarter acre. See page 51 for further particulars.

SUNFLOWER

The Chrysanthemum-flowered Sunflower grows about 3 feet high, and produces extra-large double flowers of the purest golden yellow. The stems are very long and stiff, making the flowers ideal for cutting for decorative purposes. They are most effective when used in large vases. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Cucumerifolius. Commonly called the Miniature Sunflower. Plants grow about 4 feet tall, bearing many richly colored yellow flowers that are single and quite small. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

SWEET WILLIAM

These plants are perfectly hardy, and when they are established in the garden may be increased by root division as well as from seeds. The individual flowers are large, are borne in splendid trusses, and are delightfully fragrant. They are very desirable and durable for cutting and have a wide range of colors.

Single Varieties, Mixed Colors. White, pink, purple, carmine and other colors included in this mixture. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Double Varieties, Mixed Colors. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

VERBENA

These plants make a successful display during the summer, and will furnish quantities of flowers for cutting. Strong plants can be grown without difficulty from seed that is started in the house in early spring.

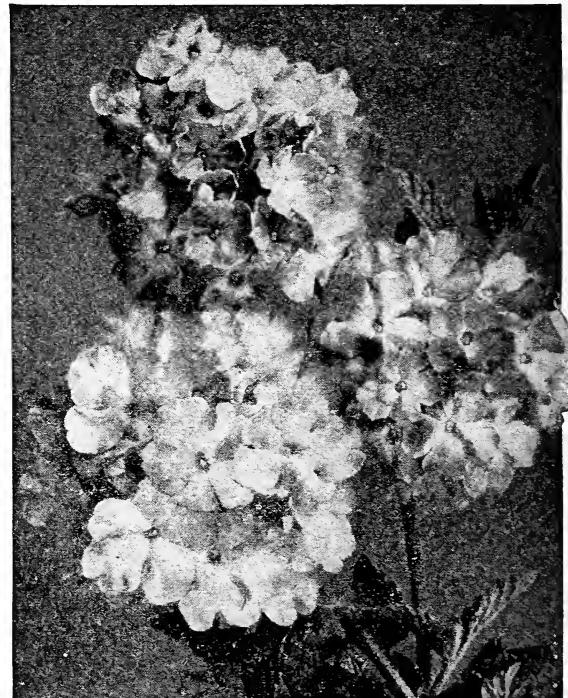
Mammoth. Red, White, Blue, or Pink, in separate colors or Mixed. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

Extra-Fine Varieties, Mixed Colors. A mixture from the most beautiful named sorts, containing specimens of white, yellow and scarlet, with shadings and markings that are beautiful. Pkt. 10 cts., $\frac{1}{2}$ oz. 50 cts., oz. 90 cts.

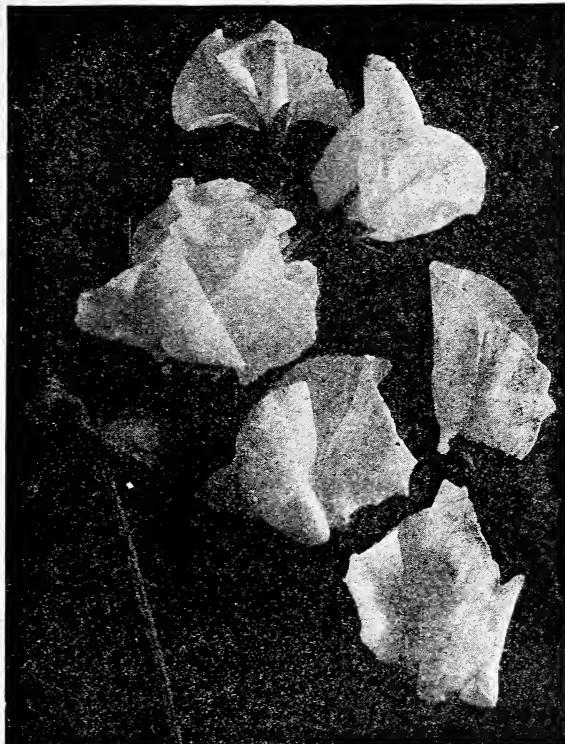
Choice Varieties, Mixed. Contains a wide range of colors, but the varieties are not quite so fine as those in the preceding mixture. Pkt. 5 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

WILD CUCUMBER

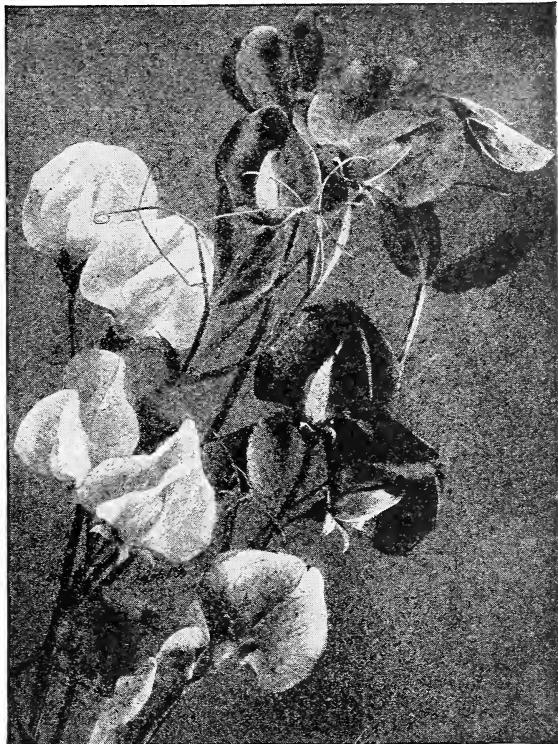
A rapid-growing climber, often running 30 to 40 feet in a season. The flowers are slightly fragrant, pure white and are followed by prickly seed-pods. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.



VERBENAS



SPENCER SWEET PEAS



ECKFORD'S MIXED SWEET PEAS

SWEET PEAS

Use Farmogerm on
Sweet Peas. See page 51

Year by year Sweet Peas increase in popularity, and the English and the American growers vie with each other in growing and producing new and beautiful sorts. While some of the new sorts are desirable as novelties, a great number of the older varieties are far more desirable on account of their blooming qualities. The important thing in growing Sweet Peas is to get the seed into the ground early—the earlier the better. The usual method is to make a trench from 4 to 6 inches deep, sow the seed in the bottom and cover with an inch or two of soil; as the plants increase in height, fill in the trench which puts the roots a sufficient distance below the surface of the soil so that they will not be very seriously affected with hot, dry weather. Support for the vines should be furnished early. To obtain the largest and best blooms plants should be thinned out from 4 to 6 inches apart.

SPENCER SWEET PEAS

The flowers are distinguished by size, which under favorable conditions are 2 inches in diameter, and also by the wavy and fluted petals.

	Pkt.	Oz.	1/4lb.	Lb.
Asta Ohn. Pinkish lavender.....	\$0 10	\$0 30	\$1 00	\$3 00
Countess Spencer. Pure pink.....	10	30	1 00	3 00
Fiery Cross. Bright reddish orange-cerise.....	10	30	1 00	3 00
King Edward. The best pure red..	10	30	1 00	3 00
Etta Dyke. Pure white.....	10	30	1 00	3 00
Othello Spencer. Rich dark maroon.	10	30	1 00	3 00
New Miriam Beaver. Light apricot and buff.....	10	30	1 00	3 00
Primrose Spencer. Very large; pure primrose.....	10	30	1 00	3 00
Margaret Atlee. Rosy salmon-buff.	10	30	1 00	3 00
Wedgwood. Fine blue.....	10	30	1 00	3 00
Spencers, Finest Mixed.....	10	25	75	2 50

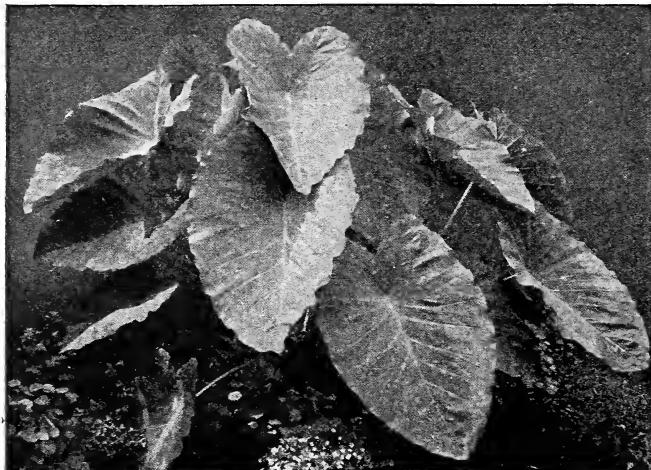
GRANDIFLORA SWEET PEAS

	Pkt.	Oz.	1/4lb.	Lb.
Blanche Ferry. Standard carmine-rose, wings white, tinged pink...	\$0 05	\$0 10	\$0 35	\$1 25
Dorothy Eckford. Large, pure white	05	10	35	1 25
Dainty. White, with pink edges...	05	10	35	1 25
Duke of Westminster. Purple....	05	10	35	1 25

	Pkt.	Oz.	1/4lb.	Lb.
Emily Henderson. Flowers large, of the open form, and pure white.				
The seeds are also white.....	\$0 05	\$0 10	\$0 35	\$1 25
Hon. Mrs. E. Kenyon. Large; primrose.....				
	05	10	35	1 25
King Edward VII. The best red...	05	10	35	1 25
Lady Grisel Hamilton. Lavender..	05	10	35	1 25
Lord Nelson. A brilliant blue or deep navy-blue	05	10	35	1 25
Navy-Blue. Standard indigo and violet, wings indigo at base, shading to bright blue.....	05	10	35	1 25
Othello. Deep maroon; of immense size. One of the best dark Peas.	05	10	35	1 25
Prima Donna. A pure pink, hooded flower, over medium size.....	05	10	35	1 25
Queen Alexandra. Scarlet; one of the finest.....	05	10	35	1 25
Romolo Piazzani. Large; bright purple.....	05	10	35	1 25
Salopian. Bright red.....	05	10	35	1 25
Eckford's Finest Mixture. This assortment is of the finest varieties. Colors vary from white to pink, deep maroon and crimson.	05	10	30	1 00

AT PRICES QUOTED ON THIS PAGE WE PREPAY POSTAGE

SUMMER-FLOWERING BULBS



CALADIUM ESCULENTUM

CALADIUM ESCULENTUM

The familiar name of these well-known plants is Elephant's Ear; the plants are from 3 to 5 feet in height, with long, massive foliage, deep green in color, but shaded along the veins with lighter green. One of the most effective and easily grown foliage plants for lawn or border. The plants are very easily started from the bulbs, and will grow almost in any soil; if specially large plants are desired, it will be necessary to start the bulbs in the early spring in pots or large boxes, then transplant to the bed which has been well fertilized. During the whole season the plants should be given an abundance of water. The bulbs may be carried over winter by taking them up after the frost has killed the leaves, drying in the open air, then placing in boxes with dry sand or soil and storing in a frost-proof cellar.

	Each	Doz.	100
5 to 7 inches circumference.....	\$0 10	\$1 00	\$7 00
7 to 9 inches circumference.....	12	1 25	9 00
9 to 11 inches circumference.....	20	2 00	14 00
11 to 13 inches circumference.....	40	3 50	25 00
13 to 15 inches circumference.....	50	5 00	40 00

If wanted by mail, add for postage, 6 cts. per dozen, for 5- to 7- and 7- to 9-in. bulbs, 15 cts. per dozen, for 9- to 11-in. bulbs, and 25 cts. per dozen, for 11- to 13- and 13- to 15-in. bulbs.

CANNAS

CULTURE.—Cannas should be planted in gyod, rich soil, say nearly half well-rotted manure, after all danger of frost is past. If wanted early, they may be started in boxes in the cellar and planted out about the middle of May. Plant about 2 feet apart. If more than one variety is planted, see that the tall varieties are planted in the center and the dwarf ones around this, giving a better effect.

If wanted by mail, add 10 cts. per dozen to the following prices

	Each	Doz.	100
Alphonse Bouvier. Very large flowers, clear crimson, in large clusters. A grand variety for bedding; luxuriant green foliage. Height 4½ feet.....	\$0 08	\$0 90	\$6 00
Chas. Henderson. Flowers brilliant scarlet, with yellow flame in throat. One of the best for bedding; a profuse bloomer. Foliage green; compact. Height 3½ ft.....	08	90	6 00
Egandale. Flowers deep currant-red of a peculiar and pleasing shade. It is an early and constant bloomer. One of the best bedders grown; foliage rich bronzed. Height 3½ feet.....	08	90	6 00
Florence Vaughan. Fine yellow, with bright red spots. Height 4½ feet.....	08	90	6 00
Gladiator. An excellent bedder, having particularly fine foliage. Color golden yellow freely dotted with crimson. The best of its class. Height 4½ feet.....	08	90	6 00
Rosea Gigantea. Rich rose-pink flowers of gigantic size; a prolific bloomer. The large, broad petals and the massive heads of bloom invariably create a sensation when seen for the first time. Height 4 feet.....	10	1 00	7 00
King Humbert. Nothing to equal it for blazy effects in bedding; easily ahead of all bronze-leaved Cannas. Orange-scarlet, flaked carmine. Height 4 to 4½ feet.	10	1 00	7 00
Yellow King Humbert. A fine, large, yellow variety. Green foliage. Height 4 feet...	10	1 00	7 00
Madame Crozy. Flowers brilliant vermilion-scarlet, with narrow gilt edge; foliage bright green. Height 3 feet.....	08	90	6 00

	Each	Doz.	100
Crimson Bedder. Fine crimson. Height 3 feet.....	\$0 08	\$0 90	\$6 00
Firebird. A pure glistening scarlet, with big broad petals of fine substance; without an equal for purity of color. Height 3½ feet.....	10	1 00	7 00
Express. The best dwarf red Canna. Bright red-crimson. Height 2½ feet.....	08	90	6 00
Panama. Color rich orange-red with a well-defined border of bright golden yellow. Flowers of large size with enormous wide petals having much substance. Height 3 feet.....	10	1 00	7 00
Queen Charlotte. Flowers rich pomegranate-red, bordered with bright golden yellow. Height 2½ feet.....	08	90	6 00
Meteor. Deep, dazzling crimson flowers produced in mammoth clusters. Height 5 feet.....	10	1 00	7 00
Wintzer's Colossal. Without a doubt the largest-flowered Canna yet produced. Flowers of vivid scarlet, sometimes measuring 8 inches across. Height 5 feet	10	1 00	7 00
City of Portland. Flowers of the largest size, borne on heavy trusses; a glowing shade of pink. Foliage substantial and strong, rich green. Height 3½ feet....	10	1 00	7 00
Golden Gate. The flowers open almost pure gold but soon become richly rayed with orange-crimson and apricot. Height 4 feet.....	10	1 00	7 00

WRITE FOR OUR FALL BULB CATALOGUE
ABOUT SEPTEMBER 1

GLADIOLI

An exceedingly popular plant, sometimes called the Garden Orchid. Almost every garden has a few bulbs of Gladioli, but most of them are of the old type, with small flowers. The more recent introductions are magnificent specimens. These should be planted the latter part of April or May for best results. Gladioli are particularly satisfactory for cut-flowers, as all the blooms on the spike will open if the cuttings are kept supplied with fresh water. The range of color is from white and pink to the most brilliant scarlet, deep crimson, rich yellow and various shades of blue.

If Gladiolus bulbs are wanted by mail, add 8 cts. per dozen for postage

America. A magnificent lavender-pink specimen. The flower-buds open very evenly, clear to the top of the spike. No other variety equals it for its value for house decorations. The bulbs are extra-selected stock, direct from the introducer. 9 cts. each, 90 cts. per doz., \$6 per 100.

Augusta. Lovely pure white, with blue anthers. 9 cts. each, 90 cts. per doz., \$6 per 100.

Brenchleyensis. This is one of the older varieties, but is still very popular on account of the color, which is intense vermillion-scarlet. Extra-select bulbs, 6 cts. each, 60 cts. per doz., \$4 per 100.

Baron J. Hulot. The deepest blue of any of the Gladioli. The shade is really a deep violet, although generally classed with the blue flowers. 10 cts. each, \$1 per doz., \$7 per 100.

Halley. A most attractive, early-blooming sort with large flowers of a delicate salmon-pink. 9 cts. each, 90 cts. per doz., \$6 per 100.

Hollandia. The flowers are of a delicate shade of yellow and are borne on long spikes. An extra-good variety for cutting. 9 cts. each, 90 cts. per doz., \$6 per 100.

Mrs. Francis King. A fine, strong-growing variety, with large spikes of showy flowers of a bright shade of pure scarlet. 9 cts. each, 90 cts. per doz., \$6 per 100.

Niagara. Leads all varieties for a good cream color; flowers blend to canary-yellow. 9 cts. each, 90 cts. per doz., \$6 per 100.

Pink Beauty. Bright pink with dark purple spots. This Gladiolus flowers about a month earlier than any other variety. 10 cts. each, \$1 per doz., \$7 per 100.

Principe. Beautiful, large expanded flower, of a bright scarlet color. 9 cts. each, 90 cts. per doz., \$6 per 100.

Glory of Holland. Large truss, pure white. 10 cts. each, \$1 per doz., \$7 per 100.

Empress of India. Dark brown-red. 9 cts. each, 90 cts. per doz., \$6 per 100.

Willy Wigman. Soft rose with blood-red blotch. 10 cts. each, \$1 per doz., \$7 per 100.

Panama. Extra-strong variety; large flowers of excellent pink color; generally known as the Improved America. 10 cts. each, \$1 per doz., \$7 per 100.

Schwaben. Delicate yellow, dark blotch in center. 10 cts. each, \$1 per doz., \$7 per 100.

Finest Mixed. This is a collection made up from named varieties, and includes some of the finest sorts in our collection, as well as named varieties that we do not catalogue. Bulbs are extra large and sure to produce satisfactory blooms. 6 cts. each, 60 cts. per doz., \$3.50 per 100.

TUBEROSE

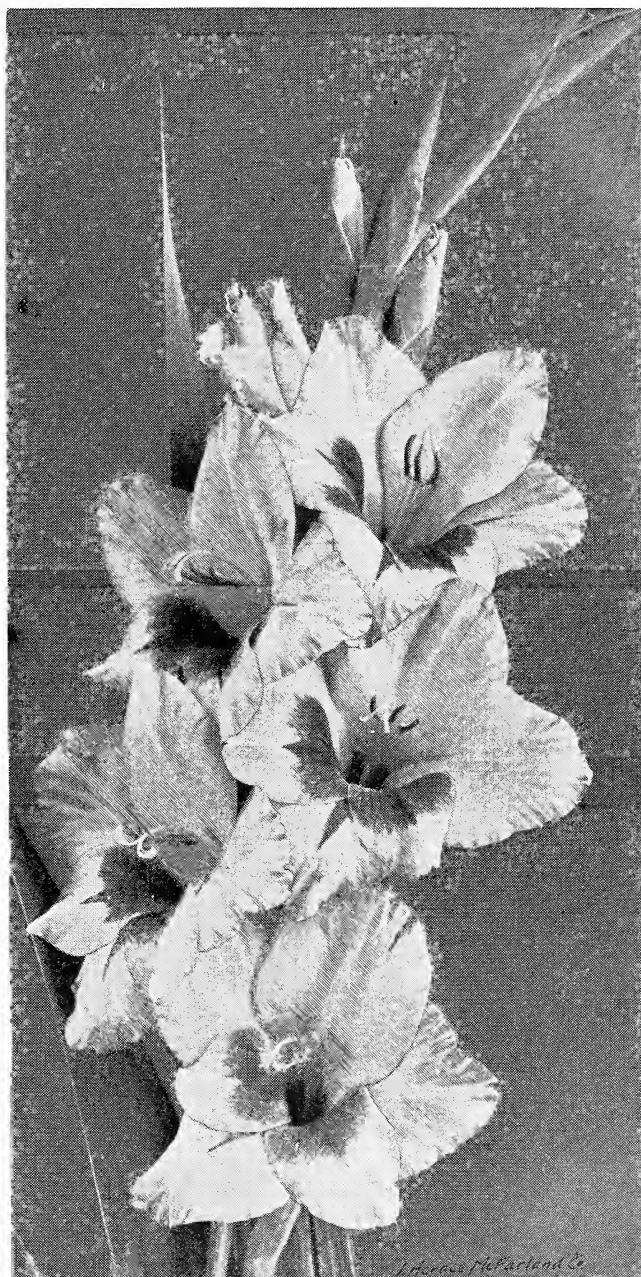
The bulbs should be started indoors, in February or March, and set in the open garden about the middle of April.

White Pearl, First Size. The flowers of this Tuberose are exceptionally large and full-double. 6 cts. each, 70 cts. per doz., \$4.50 per 100. If wanted by mail, add 10 cts. per doz. extra.

White Pearl, Mammoth. 9 cts. each, 85 cts. per doz., \$6 per 100. If wanted by mail, add 10 cts. per doz. extra.

MADEIRA VINE

A rapid-growing vine that is sometimes called "Climbing Mignonette." The foliage is light green; the plants bear



TYPE OF OUR GLADIOLI

many small, white, feathery flowers. The plants will grow anywhere and are free from insect pests of all kinds. Fine for porches, arches and trellises, and for covering rocks and stumps. Large, selected bulbs, 10 cts. each, \$1 per doz., \$7 per 100. If wanted by mail, add 8 cts. per doz. extra.

CINNAMON VINE

Splendid hardy climber of rapid growth, with bright green, heart-shaped leaves, and white cinnamon-scented flowers. 8 cts. each, 75 cts. per doz., \$6 per 100.

DAHLIAS

These are among the most valuable late summer- and autumn-flowering plants that we have. Some of the extra-early varieties will produce flowers in July; but, as a general thing, the blooms come about the middle of August. The bulbs should be set in an open, sunny place, where they may have light and heat the greater part of the day. If extra-fine specimens are desired, the soil must be well enriched and kept free from grass and weeds. Lay the bulbs on the side, covering with 2 or 3 inches of soil. The tall-growing varieties should be supported by stakes. After the frost has killed the foliage, the roots may be taken up and stored in a cool cellar.

If wanted by mail, add 5 cts. each, or 25 cts. per dozen to the following prices

CACTUS DAHLIAS

These form a distinctive class, with petals that are curled, quilled and twisted in various shapes that differ radically from the standard Dahlias.

25 cts. each, \$2.50 per doz.

Cornucopia. Hybrid. Fine cutting variety; salmon, tinted rose.

Capston. Salmon-red.

Earl of Pembroke. Deep plum purple.

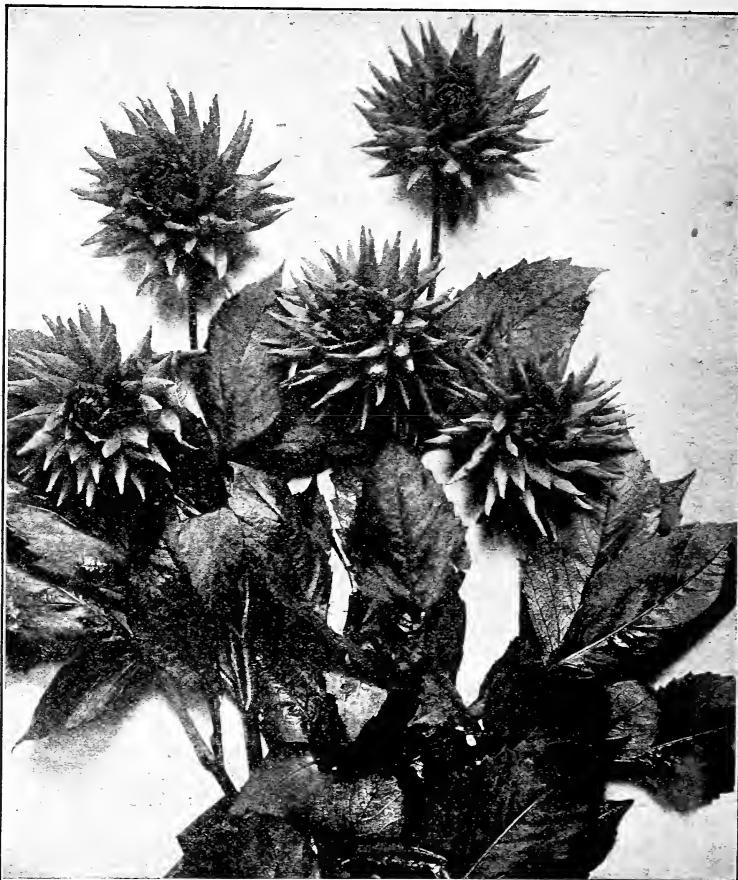
Fusileer. Pure saffron-bronze. Very attractive.

T. A. Havemeyer. Amber-yellow, with deep shadings of bronze.

Borneman's Liebling. Charming, soft, silvery pink.

Night. Fine maroon.

Order your Spring Bulbs and Dahlias early while our stock is complete



CACTUS DAHLIAS

SHOW AND DECORATIVE DAHLIAS

The Show Dahlias include the old-fashioned, ball-shaped, double flowers; they are somewhat stiff when compared with the Cactus sorts, but are popular because of the brilliant colors and extra size. The Decorative Dahlias have broad petals and are quite loosely formed, although in general appearance the flowers are more compact than those of the Cactus Dahlia. Both the Show and Decorative Dahlias are splendid for cutting.

25 cts. each, \$2.50 per doz.

A. D. Livoni. (Show.) Rich seashell-pink.

Black Prince. Best dark maroon; long stems.

Jack Rose. An old variety, but its brilliant American Beauty red makes it indispensable in every garden.

Miss Miller. Fine yellow.

Oban. Beautiful mauve; very good for cutting.

Queen Victoria. Best yellow; fine cut-flower.

Storm King. Large; white.

Stradella. Glowing dark crimson, tinted purple.

PAEONIA OFFICINALIS ROOTS

35 cts. each, \$3 per doz.

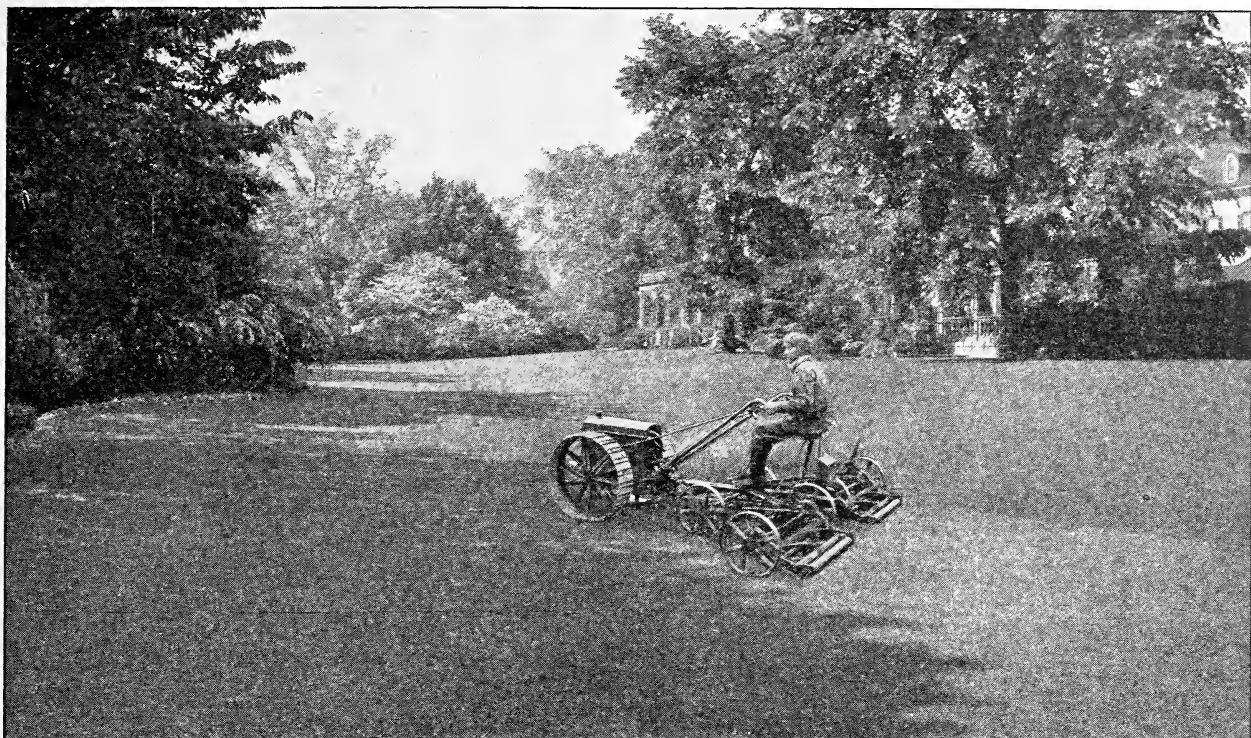
Rubro-plena. The old-fashioned Peony; deep brilliant red; early. Large, globular blooms. **Rosea.** Fine pink. **Mutabilis.** White.

If wanted by mail, add 5 cts. each, or 25 cts. per dozen to the above prices

Write for Our Fall Bulb Catalogue About September 1

DECORATIVE DAHLIA

SEE OUR LIST OF PLANT FERTILIZERS ON PAGE 54



The New Britain Tractor operates a triple lawn mower with three 30-inch mowers. (See page 61.)

Lawn Grass Seed

Our Lawn Grass mixtures are made of the best recleaned American and European Grass Seeds we can procure. We use no "fillers," such as unhulled Red Top, light weight Blue Grass, etc., in making them up.

The new Pennsylvania Seed Law, now in effect, requires that every package of Lawn Grass, or other grass seed mixtures offered for sale, weighing eight ounces or more, shall bear a label giving the names of the seeds composing the mixture, the percentage of weed seeds, and the percentage of inert matter. Purchasers should insist on this information when buying Lawn Seed.

MIXED LAWN GRASS SEED

This is an extra-fine mixture of recleaned Grass Seeds of the varieties that are best adapted to general lawn sowing. In making up this mixture it was our aim to make a formula that would produce a durable and lasting lawn, notwithstanding the extreme heat of the summer, the cold and frost of winter, as well as periods of drought and moisture that mark our Pennsylvania climate. We believe the testimony of our customers will prove that we have succeeded in our efforts, and a lawn that is sown with our Lawn Grass Mixture will show a rich, velvety appearance in five to six weeks after sowing. A measured bushel will weigh about twenty-seven pounds, and about 75 lbs. will be required to seed an acre of lawn. About ten pounds will be required for an average city lot, measuring 30 by 100 feet; this will give a good liberal seeding. Less than 10 lbs. 50 cts. per lb.; 10 lbs., \$4.50; 25 lbs. and over, 40 cts. per lb. If wanted by mail, add postage at your zone rate, according to the table on inside of front cover. Special prices will be quoted on large quantities.

SHADY LAWN MIXTURE

This mixture is made from Grasses which will thrive under the shade of trees and buildings, where comparatively little sun reaches the ground, and in places where ordinary Grasses will not succeed. The quantity of seed required for sowing is practically the same as for our Lawn Grass Mixture. Less than 10 lbs., 65 cts. per lb.; 10 lbs. and over, 60 cts. per lb. If wanted by mail, add postage at your zone rate, according to the table on inside of front cover.

PUTTING-GREEN MIXTURE

Our Putting-Green Mixture is made from selected stocks of those European and American Grasses which have proved the best for the purpose. As we import large quantities of Grasses, we are well equipped for preparing special Golf-Course Mixtures. Less than 10 lbs., 65 cts. per lb.; 10 lbs. and over, 60 cts. per lb. If wanted by mail, add postage at your zone rate, according to the table on inside of front cover.

FIELD SEEDS AND GRAINS

THIS DEPARTMENT OF OUR BUSINESS HAS ALWAYS RECEIVED SPECIAL ATTENTION

The Grains and Grass Seeds we offer are selected with special reference to their purity and germination, and great care is used to have them free from noxious foreign seeds. We handle the very best seeds the market affords, regardless of price.

The new Pennsylvania Seed Law, now in effect, requires that every package of field seeds offered for sale, weighing ten pounds or more, shall bear a label or tag giving the percentage of purity, the percentage of weed seeds, the names and number of noxious weed seeds per ounce, and the percentage of germination with the date of test.

Every farmer should write the Pennsylvania Department of Agriculture, Harrisburg, Pa., for a copy of this law, and insist on this information when purchasing seeds.

Our Special Seed Price-List

Owing to the frequent changes in the market prices of Field Seeds and Grains, in justice to our customers, as well as ourselves, we cannot name prices in this catalogue. We, however, issue a Special Seed Price-List covering all our Field Seeds and Grains, which is corrected as market changes occur. A postal card will bring this price-list, also samples when requested.

TIMOTHY

A description of this old familiar hay-making grass is unnecessary here. It is recognized by almost everyone wherever found, and is probably the most extensively grown of all the grasses. It may be sown alone or with Red or Alsike Clover, or with other grasses. From twelve to fifteen pounds of seed are usually sown to the acre.

CLOVERS

MEDIUM RED. More widely known than any other variety of Clover. Makes a standard Clover for hay purposes, as it can be cut at least twice in the season. Plants grow about 2 feet in height. Sow the seed in the early spring or late summer at the rate of fifteen to twenty pounds to an acre. If used with other seeds, ten pounds to an acre will be sufficient.

MAMMOTH RED. Sometimes called Sapling or English Clover. It is much ranker than the Medium Clover, and yields a much larger crop per acre. It does well on poor soil, is hardy, and usually will stay in the ground longer than Medium Clover. Seed cannot be distinguished from that of Medium Red by its appearance.

ALFALFA. One of the most nutritious plants grown; valuable as a dried hay or for pasture. With proper cultivation it can be grown on some part of almost any farm in Pennsylvania or adjoining states. Two or three cuttings can be made in a season, producing from three to five tons of hay per acre. Ton for ton its feed value equals that of wheat bran. From twenty to twenty-five pounds of seed are usually sown to the acre. Some farmers sow thirty pounds to the acre. We sell but one grade of Alfalfa seed, the very best northwestern American-grown; also the Grimm variety.

ALSIKE. One of the best for sowing with Timothy. The seed may be planted in spring, late summer or early autumn, and as the plants are perfectly hardy, the field seldom requires re-seeding. The flowers resemble White Clover, but have a red tinge on the edge of the petals and are considerably larger. Thrives better on thin soils than Red Clover.

WHITE. White Clover is specially valuable for lawn planting and is likewise good for pasturage. When sown with Lawn Grass it helps to make a permanent turf; in the pasture it is not quickly destroyed by hoofs of cattle and horses. Seed can be sown any time during the summer, although best results are obtained from early spring sowing. It is perfectly hardy and very thrifty. Use from ten to twelve pounds to the acre if sown alone; about five pounds to the acre if sown on old sod or with other Clover.

IMPROVE YOUR POOR FIELDS

The greatest soil builder and honey plant yet discovered is Hubam Sweet Clover. See page 50.

CLOVERS, continued

CRIMSON. This Clover is used principally for turning under as a green fertilizer, or for sowing with corn for a winter cover-crop. If desired for feed, the plants should be cut just before they come into bloom. Seed may be sown any time after the first of April at the rate of twenty pounds to the acre. Plants are strictly annual, therefore, the field must be re-seeded every year. Thrives on poor land and increases fertility of the soil.

SWEET. Also known as Bokhara or *Melilotus*. This is a legume whose value as a soil improver is just beginning to be appreciated. It is also used for forage, but on account of its taste, the cattle take to it very slowly. It can be grown on soil that is too poor to grow other legumes, and it is claimed the bacteria on its roots will inoculate Alfalfa. It may be sown either in the spring or fall. Although a great number of different species are grown in the Old World, the two principal varieties used in this climate are the white biennial (*Melilotus alba*), and the newly discovered Hubam. For description of this variety see page 50.

GRASS SEEDS

BLUE GRASS. Kentucky Blue Grass is most valuable for pastures and lawn planting. For lawns it is indispensable and, when well established, the lawn will last for years, as the Grass makes an extra-close fine-textured turf. The seed should be mixed with other Grasses that mature earlier, for Blue Grass is very slow in both germinating and maturing.

ORCHARD GRASS. A quick-maturing Grass that is used for pasture and hay. It may be cut several times during the year, but it is advisable to use the machine before the plants show the seed-heads. From thirty to thirty-five pounds will be required for an acre.

RED-TOP. A valuable Grass for hay, pasture or lawn. It will grow on any soil that is not extremely dry. With the possible exception of Kentucky Blue Grass, it surpasses all other Grasses for lawn-making, and is an extra-good variety for golf-grounds and other places where the turf must withstand hard usage. About fifteen to twenty pounds of seed will be required for an acre. We handle nothing but the solid seed, having discarded the unhulled and chaff grades.

HARD FESCUE. Grows well in dry, sandy soils, and is especially good for pasturage and haying; stands extremes of cold and heat. About thirty pounds will be required for an acre.

RED FESCUE. This is commonly called Creeping Fescue. It is largely used in sandy soils, but will grow well on even the poorest land. It is good for hillsides, embankments and shady places. About thirty-five pounds of seed will be required for an acre.

GRASS SEEDS, continued

VARIOUS-LEAVED FESCUE. A good variety to grow in orchards, as the plants thrive best in shady, moist situations. The plants are from 2 to 3 feet high and quite hardy. About forty pounds of seed will be required for an acre.

WOOD MEADOW GRASS. Will grow in shady places where practically no other Grass will succeed, and therefore is particularly desirable for shaded lawns. It is also desirable for mixing with golf-link Grasses, as it makes a compact turf. About thirty-five pounds of seed for an acre.

SHEEP'S FESCUE. A Grass that will grow on poor soil where most other sorts would die from lack of nourishment. It always stands severe droughts and long, cold winters. It makes excellent pasture Grass, and can also be used for the lawn when combined with other Grasses. About forty pounds will be required for an acre.

CRESTED DOG'S-TAIL. A low-growing Grass that makes extra-dense turf in rich, moist soils; is also desirable for putting-greens and lawns. Will grow equally well in the shade or the sun. About seventy pounds of seed will be required for an acre.

RHODE ISLAND BENT. A superior Grass for putting-greens on account of its dwarf growth and its narrow leaves. It will grow and make good turf in good or bad soils, and dry weather or heavy rains seem to have no serious effects. About forty pounds of seed are required for an acre.

PERENNIAL or ENGLISH RYE GRASS. Where a rapid growth is desired, this is the Grass to sow, as it will make a reasonably good showing when three or four weeks old. It is extensively used in lawn seed mixtures. About seventy pounds of seed will be required for an acre.



COWPEAS

MISCELLANEOUS FARM SEEDS

COWPEAS. One of the best soil-enrichers, taking the nitrogen from the air and storing it in the soil; valuable also for hay, forage, ensilage or turning under. Will grow on poor land and even though the crop is taken off the soil is enriched and following crops do better. All things considered, there is probably no surer or cheaper method of bringing up poor soils than by a liberal sowing of Cowpeas. They should be sown in this latitude in

May or June, using, when sown broadcast, one and one-half to two bushels to the acre. Many different varieties are grown in the United States, but those most suitable for sowing in the North are the following:

Whippoorwill. This is the most popular variety in the North; ripens early and is very productive.

New Era. An extra-early variety, maturing in about sixty days.

Mixed Varieties. This mixture consists of a half-dozen or more of the leading varieties, and is usually sown for hay, pasture, or turning under. They are almost sure to make a heavy growth.

CANADA FIELD PEAS. A crop of great value and increasing in popularity every year. Used for hay and pasture as well as soil-improvement. Canada Field Peas should be sown as early as possible in the spring, either alone or with oats. When sown broadcast alone, at least two bushels of seed to the acre should be used, or with oats, one and one-half bushels of Peas and one bushel of oats.

SOY BEANS. Sometimes called Soja Beans. Another valuable plant for bringing nitrogen into the soil. It is also excellent for green or dried fodder, and the seed is very rich in protein, making an excellent dairy feed when balanced with other grains. Seed should be sown during the months of May or June, using at least one bushel to the acre, when sown broadcast, or when sown in drills, 2½ feet apart, about three pecks to the acre. We handle three varieties—**Mammoth Yellow, Medium Green, and Wilson.** The Medium Green and Wilson mature earlier than the Mammoth Yellow, but are smaller in growth. The Mammoth Yellow requires about 120 days to mature, the Wilson and Medium Green about twenty days less.

DWARF ESSEX RAPE. Especially valuable for feeding sheep, hogs and cattle. Claimed to have a feed value greater than clover. Always used as a pasture and not for hay. Its growth is similar to turnip-tops, but heavier and taller. If seed is sown in May the field should be ready for pasture in July. However, seed may be sown either in early spring, summer or fall. If sown in drills, about five pounds of seed will be required for an acre; if sown broadcast, ten pounds to the acre.



WINTER VETCH

MISCELLANEOUS FARM SEEDS, continued

WINTER or HAIRY VETCH. One of the best legumes, whether used for a hay crop, pasture, soil-improvement or cover crop. Thrives on light soils and is very hardy, remaining green throughout the winter. May be sown in the spring or fall, using from sixty to seventy pounds of seed to the acre when sown alone. It is better, however, to furnish a support for the Vetch by sowing rye, barley or oats with it at the rate of one-half bushel of grain and fifty pounds of Vetch to the acre.

MILLET. A medium-early forage plant which will grow in almost any climate or soil and produces heavy yields of fodder. The crop should be cut while the plants are in bloom, or at least before the seed forms. Seed may be sown during the month of May or the early part of June at the rate of from thirty to forty pounds to the acre. We handle four varieties of Millet—Western sometimes known as Common Millet; Tennessee, or Golden; Hungarian and Japanese.

SORGHUM, or AMBER CANE. Used principally as a summer fodder for cattle. Plants will grow rapidly and at least two crops can be cut each season. If carefully cured it will make an excellent dry fodder. The seed may be sown in drills about 30 inches apart, at the rate of five to six pounds of seed for an acre. If sown broadcast, from seventy-five to one hundred pounds of seed is generally used. Set the drills so that the seed will be sown thickly, but not heavily covered.

SUDAN GRASS. This was introduced into the United States in 1909 from Africa. It is thought to be the wild original form of our cultivated sorghum. It is strictly an annual and dies each year like Millet. Since its introduction into this country, it has been grown extensively in the dry regions of the West and Southwest, producing immense quantities of both seed and hay. It grows from 5 to 9 feet high, has great drought-resisting qualities, and is recommended as a substitute for millet, for a catch crop. Once started, it will grow vigorously without rain. To secure best results, it should be planted in rows wide enough to permit of cultivation. If sown in rows, 4 to 6 pounds of seed per acre is recommended or broadcast 16 to 24 pounds per acre.

HUBAM CLOVER The greatest soil-builder and honey plant yet discovered is Hubam Clover.
(See page 50)

OATS

Victory. Absolutely one of the greatest Oats in the world today. This variety was bred by Prof. Nilsson Svalof, of Sweden, who is recognized as one of the greatest seed-breeders in the world. It has been grown in western Canada for about seven years, also in parts of the western states for the past four or five years.



STORM KING OATS

STORM KING. A side Oats that has been grown successfully for some years. It derives its name, Storm King, from the strength of the straw, which often measures from $4\frac{1}{2}$ to $5\frac{1}{2}$ feet in height. It will stand the most severe winds without lodging. The heads are very long, containing an unusually large number of grains, its average yield running from 70 to 100 bushels to the acre. The seed we offer is grown by the originator of this valuable Oats, and is therefore pure-bred, true to name. It costs more; it's worth more. There is no other side Oats equal to Storm King.

SWEDISH SELECT. This variety is too well known to require a lengthy description here. The quality of the grain is unsurpassed. Very thick kernel and thin shuck. Does not have a long beard like common Oats. The straw grows to a medium height, is very stiff, and consequently seldom lodges. It has proved to be a wonderful yielder, winning the \$1,500 Colorado Trophy in open competition to the North American continent.

A CHANGE OF OATS IS EVEN MORE IMPORTANT THAN A CHANGE OF SEED POTATOES

FIELD CORN

We have always made a specialty of Seed Corn, supplying our trade with only those varieties that experience has proved are most suitable for the climate of Pennsylvania, Ohio, and West Virginia. Our Seed Corn is carefully hand-picked and tipped and butted before it is shelled. We aim to have every variety true to name and of high germination.

BIG YELLOW DENT. The ears are immense—12 to 14 inches long, with 20 to 24 rows of long, large grains. It is, without question, one of the most valuable Yellow Dent Corns ever produced because of its immense yield—at least 25 per cent, and often 50 per cent, more bushels to the acre than any of the average yields of other varieties. Stalks grow from 12 to 15 feet high, giving an immense quantity of fodder as they are heavily covered with big, broad leaves. If you want the biggest and best crop in the neighborhood, then sow Big Yellow Dent. Plant it in May and it will mature in September.

SURE-CROP NINETY-DAY. The tremendous quantity of shell Corn this variety produces to the acre surprises everyone who grows it. Generally there are two good ears to a stalk. The grain is very long, longer than any other, and the cob very thin. Sure-Crop has a rich, deep yellow grain, making it much desired by millers. The fodder grows from 8 to 10 feet high. It is positively an early Corn, and you are always sure of a crop in the shortest season.

PRIDE OF THE NORTH. A Yellow Dent variety, maturing in 90 days. Ears 8 to 10 inches long, sixteen rows on the ear, cob small, grain above medium size and closely set. One of the hardiest, and especially adapted to the northern planter; will mature farther north than any other Dent Corn.

PATTON'S IMPROVED LEAMING. The original seed of Patton's Improved Leaming Corn was purchased of J. S. Leaming, of southern Ohio thirty-eight years ago and has been grown on the Patton Farm in Lawrence County, Pa., every year since the first planting. It has become well acclimated in western Pennsylvania. It matures in from 90 to 100 days. It produces a good-sized ear, with deep broad grains, which contain a large germ and shoots out a large vigorous sprout, that makes a strong, quick growth at the start. This is the secret of a good crop of Corn. A good start is half of the battle in raising a Corn crop. Patton's Improved Leaming grows a strong root and very leafy fodder, making it one of the best varieties for silage. The seed is kiln-dried and guaranteed. In a good season, Patton's Improved Leaming has yielded as high as 75 bushels of shelled Corn per acre.

WHITE-CAP YELLOW DENT. An early sort which grows well on light soil; grain is yellow with white tip. Nearly as early as Pride of the North, maturing in from 90 to 95 days. Ears from 8 to 10 inches long, well filled, with sixteen or eighteen rows.

REID'S YELLOW DENT. This variety has won many prizes in Corn shows in various parts of the country. It originated in Illinois and soon became extremely popular. The cob is medium large, with good-sized, deep grain. Matures in from 100 to 110 days.

BLOODY BUTCHER. A deep cherry-red Corn with white cap, maturing in about 90 days. Has long, slender ears, generally fourteen rows and a small cob.

IOWA SILVER MINE. One of the most popular of the white varieties. Ripens medium-early, maturing in about 100 days. Produces extra-long ears, with from fourteen to eighteen rows, of pure white kernels solidly set on the ear.

ENSILAGE CORN

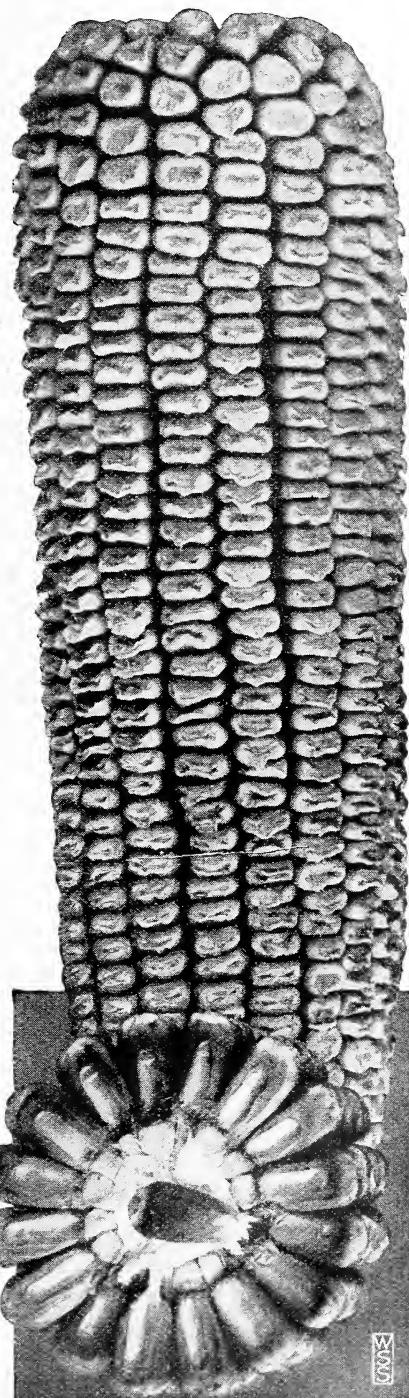
EUREKA. (Virginia-grown.) The Eureka is a Virginia-bred Corn and originated about twenty years ago on the rich bottom of the James River Valley where it grows to perfection, often attaining a height of 16 to 18 feet. It is a vigorous grower, large stalks, with unusually heavy foliage, and produces from one to three ears to the stalk, according to the land. The ears average about 11 inches in length. Will produce more tons of ensilage to the acre than any other variety.

BLUE MOUNTAIN. This Corn is grown at a high altitude in the Blue Ridge Mountains in Virginia, and makes an ideal Ensilage Corn. Grows to a mammoth size, full of leaves, and has a big ear. On account of its being grown at a high altitude in the mountains, it is earlier than the ordinary southern-grown Ensilage Corn and will be ready for the silos before frost comes. It is a vigorous growing Corn, often knee-high after 30 days from planting, and grows 14 to 16 feet high. Our seed is selected in the fall, properly taken care of, and always shows nearly a perfect germination test.

VIRGINIA GOLDEN DENT. A new variety of Ensilage Corn grown in Virginia and becoming very popular in the northern states. Although not quite so large as the Eureka, it matures about three weeks earlier, and consequently makes better ensilage in the North, especially in late seasons. We can highly recommend it to those who are partial to a yellow Corn and want a variety that is earlier than Eureka.

VIRGINIA HORSE-TOOTH. The popular fodder Corn of the southern states; from 12 to 14 feet high, and stiff enough to stand up during severe storms. The seed is white, broad, and deep, with white cob.

RED-COB. A tall-growing plant, with a quantity of side leaves, making it desirable for ensilage. A favorite with a great many growers. The grain is narrow and clear white.



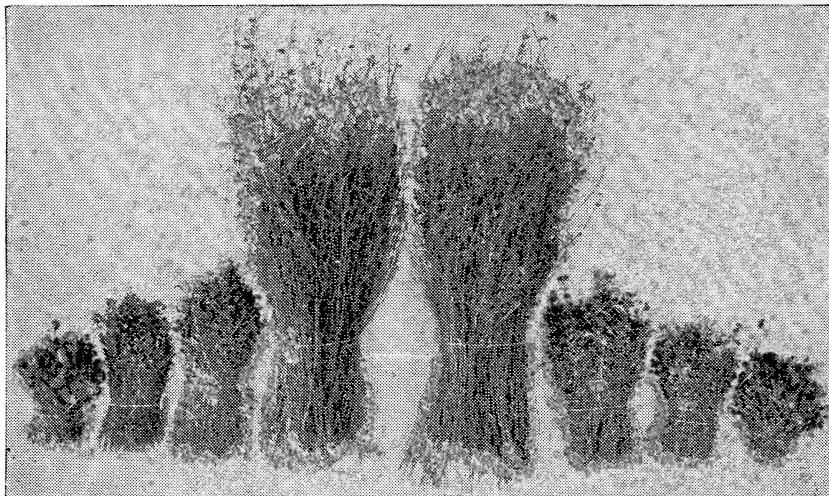
SURE-CROP NINETY-DAY CORN

HUBAM CLOVER

Quick Growth and an Unusual Wealth of Honey-Making Blooms Are Combined with a Legume Action that Returns Large Quantities of Valuable Plant Food to the Soil

The
New
Annual
White
Sweet
Clover

The
World's
Greatest
New
Plant



Four types of Clover which were seeded with spring wheat. The wheat was cut off and the Clover allowed to grow until September when it was cut. At the extreme right and left is ordinary Red Clover, next is Yellow Biennial Sweet Clover, and next is White Biennial Sweet Clover, and the center sheaves are Hubam Clover.

Hubam is the new fast-growing Clover about which so much has lately been published in the agricultural press. Hubam Clover has received more attention than any other plant ever discovered. Many prominent agricultural authorities believe it of such great value to the farms of the country that it will revolutionize crop rotations.

Hubam Clover is a variety of Sweet Clover. It makes about the same growth in one season that the ordinary Sweet Clovers do in two. With the exception of Hubam, all the common Clovers are biennial or two-year Clovers: the seed is sown one spring, the Clover makes a small growth the first season, goes into a dormant state through the following winter, completes its growth, matures seed, and dies the next summer. In contrast to this: Hubam Clover continues its growth until it reaches a height of from 3 to 7 feet within four to seven months from the time the seed is planted, matures its seed, and dies, all within the one season. Through the use of Hubam Clover as a substitute for other Clovers, one year can be saved in the ordinary farm rotation. The value of this new Clover to the agriculture of the country can hardly be measured in dollars and cents.

Mr. COLLINGWOOD in "Rural New Yorker," says:

"Northern farmers are to have the help of what we believe to be the greatest manurial plant ever brought to their attention. This is the Annual White Sweet Clover. Inside of 100 days it will bring to the soil and distribute as much nitrogen as a farmer can hope to get from fifteen loads of manure to the acre, which seems like an incredible statement, but we believe time will fully vindicate this judgment."

E. R. ROOT in "Gleanings in Bee Culture," says:

"As to Honey, the Hubam Clover will yield in quantity and quality as much as its near relative, the white biennial sweet clover. This is proved out in North Dakota, Ohio, and Alabama. Its quality, if I am any judge, is equal to that of any honey produced in the United States."

PRICE FOR 1921 CROP. In the fall of 1920, the price for Hubam Clover was set at \$5 a pound by the few producers having it to sell, but this price rapidly advanced to \$10 per pound, and the seed was all taken and money for orders was being returned long before planting season was over. We are now offering high-grade scarified seed in sealed guaranteed packages, with the necessary inoculation material free, at \$2.50 per pound, postpaid. When the order amounts to 10 pounds or more we will supply it at \$2 per pound, F. O. B. Pittsburgh.

DON'T BE LATE. Send for your Hubam Clover seed today. Don't run the risk of not being able to get it at all later.

POSSIBILITIES FOR THE FARMER

The vigor of the growths reported gives some idea of the possibilities of the plant for green manure, pasture, and forage production. Grown under crowded field conditions, the Clover makes a much finer growth and may furnish two cuttings of hay, or an abundance of highly nutritious pasture for cattle, horses, or sheep. Plowed under, Hubam Clover gives the largest amount of manurial matter in the shortest time of growth of any plant known.

When seeded with small grain at Ames, Iowa, Hubam produced six times the growth of that of Medium Red and Mammoth Clover, and three times that of the Biennial White Sweet Clover, following the removal of the small grain crop.

POSSIBILITIES FOR THE BEEKEEPER

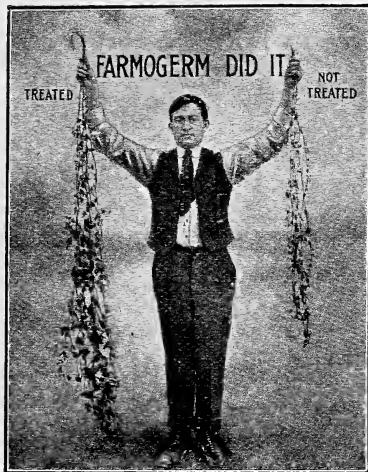
Progressive beekeepers consider Hubam Clover the greatest of all honey-producing plants. This is because of its richness in nectar and its long-blooming period that in most regions comes when the other main honey-flow is past.

Write for Free Booklet, "Hubam Clover, What It Is and How to Grow It"

THE STANDARD INOCULATION

FARMOGERM

HIGH-BRED NITROGEN-GATHERING BACTERIA for
CLOVERS, ALFALFA, BEANS and OTHER LEGUMES



A Seed Inoculant That Increases Crop Production

Seeds of all legumes—beans, peas, clover, alfalfa, and related crops—will produce far better if inoculated with Farmogerm. In addition to the increased crops, these legumes leave in the soil a heavy deposit of nitrogen which benefits all succeeding crops. Gardeners and farmers who have used Farmogerm would not be without it.

Farmogerm is the “Always Fresh” Seed Inoculant

Because of the method of sealing the bottle—a patented stopper which admits filtered air and keeps out all impurities—Farmogerm is just as good in three or four years as when first bottled. The bacteria in Farmogerm and other inoculants of like character are living organisms, feeding on nitrogen in the air—without air, they cannot live. If tightly sealed, the bacteria gradually become weaker and weaker until they are worthless. That is why many inoculants have to be replaced before they are six months old.

USE FARMOGERM

FOR

Bush Beans
Pole Beans
Lima Beans
Soy Beans
Sweet Peas
Garden Peas
Field Peas
Cowpeas
Vetch
Alfalfa Clover
Red Clover
Alsike Clover
Sweet Clover
Crimson Clover

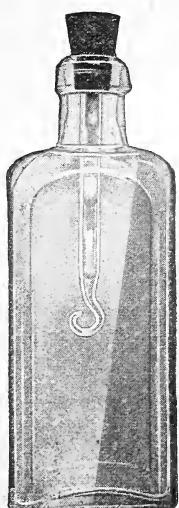
The cost is so small that no gardener or farmer can afford not to use it.



Farmogerm Stays Good Indefinitely

Farmogerm keeps for years and years. Enough air seeps through the plugs to keep the bacteria in good health, yet all impurities are excluded. Other inoculants get weaker each day—Farmogerm always has its full strength. Just add water and shake the bottle and sprinkle over seeds as directed. Your crop will benefit beyond your expectations.

No other inoculant on the market is so strong and virile; no other inoculant will thoroughly inoculate as much seed. The one-acre size bottle of Farmogerm is sufficient for 15 pounds of clover, 20 pounds of alfalfa, 100 pounds of Canada field peas, 60 pounds of vetch, etc. A different culture is required for each crop. *Be sure to state what crops you wish to inoculate.*



Farmogerm Prices Reduced

New scientific methods of manufacture have given lower prices. You cannot now afford to do without Farmogerm.

A special composite culture is prepared for peas, beans, and sweet peas, $\frac{1}{4}$ -acre size only. You'll get more peas and beans, and larger sweet peas by using this. Ask for No. 5, price 50 cts., postpaid.

PRICES POSTPAID

1-acre size, \$1; 3-acre size, \$2.50; 12-acre size, \$9. Full directions accompany each bottle.

FERTILIZERS

What the Crop Needs. We need to bear in mind that the great object of fertilizing is to feed the crop and not to feed the soil, and in determining what the different crops need it is important to understand the purposes served by the different elements. We are all familiar with the fact that nitrogen, phosphoric acid and potash are the three critical or vital elements of plant-food. The functions or uses of these plant-food elements are as follows:

Uses or Purposes of Nitrogen. Nitrogen builds up the young tissues in the new and rapidly growing parts of the plant, and is one of the chief constituents of the living matter with which the minute plant-cells are filled. It increases the amount of protein, which is the muscle-making and strength-giving element of the plant when used as food. It promotes a healthy growth, gives a good green color to the foliage, and in general has a tendency to give a greatly increased growth of stems and leaves. Thus we see the necessity for using nitrogen in abundance on the grass crop, which is valued chiefly for its leaf and stem; also for such crops as lettuce and spinach, valued for their leaves, and it should also be used in abundance on crops where rapid new growth is essential, such as asparagus, rhubarb, tomatoes, etc.

Uses or Purposes of Phosphoric Acid. Phosphate of lime (consisting of phosphoric acid and lime) forms a large part of the

framework of plants, just as it forms the chief constituent of the bones of the human skeleton. Plants lacking phosphoric acid die before reaching maturity. Phosphoric acid also nourishes the seeds of the plant (where it is present in great abundance) and hastens the plant's growth to maturity. It is especially used in large amounts by plants belonging to the cabbage family, including cabbages, turnips, brussels sprouts, cauliflower, kale, rape and mustard, and also by cereal crops such as wheat, barley, rye, oats, etc.

Uses or Purposes of Potash. Potash is concerned especially with the formation of starch and sugar in plants and also with the development of the fleshy part of fruits, fruit juices, and fruit acids. It is of great importance to corn, potatoes, beets, tobacco, strawberries, grapes, apples, and also to the leguminous crops such as clover, alfalfa, peas, beans, etc. The reason for this is very evident when you reflect that the greater part of a kernel of corn is starch, and that a potato is made up very largely of starch and water.

In the manufacture of the following Fertilizers, all these important facts are carefully borne in mind, and it is our object to furnish our customers such Fertilizers as shall produce the largest crops at the least possible cost to the consumer.

E. Frank Coe's Fertilizers

1857 — The Business Farmer's Standard for Over 65 Years — 1922

For more than sixty-five years we have specialized in the manufacture of high-grade fertilizers particularly adapted to the soil and crop conditions of the northeastern United States. There are sixty-five years of laboratory work, factory experience, practical farm tests, and thorough scientific knowledge behind every bag of E. Frank Coe's Fertilizers. We manufacture a large assortment of brands which are formulated especially to meet western Pennsylvania requirements.

Our Service Department will gladly recommend the brands which we believe will give you the greatest possible profit if you will indicate to us the type of your soil and the crops which you wish to grow.

A series of helpful booklets is offered without charge to interested farmers. The I. W. Scott Company, our western Pennsylvania agents, or our Buffalo office will be pleased to furnish you with any of the following:

- “Corn: The Foundation of Profitable Farming”
- “Potatoes: A Money Crop”
- “The Neglected Hay Crop”
- “Better Vegetable Growing”
- “Oat Production”
- “How to Get the Most Out of Fertilizer”
- “Winter Wheat and Its Culture”

To secure maximum profits under present conditions, the farmer must strive to secure bigger crops at less cost. E. Frank Coe's Fertilizers will help you to secure at minimum cost, “A Greater Yield from Every Field.”

THE COE-MORTIMER COMPANY

Subsidiary of the American Agricultural Chemical Co.

125 Lewis St., Buffalo, N. Y.

E. Frank Coe's Gold Brand Excelsior Guano

For Market-gardeners. (3-8-4.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	2.47
Equal to Ammonia	.....	3.00
Available Phosphoric Acid	.....	8.00
Potash (actual)	.....	4.00

In 100-lb. bags
100 lbs..... \$3 50 | 1,000 lbs.... \$24 50
500 lbs..... 12 75 | 2,000 lbs.... 48 00

E. Frank Coe's Prolific Crop-Producer

A high-grade Fertilizer for Truckers. (4-10-0.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	3.29
Equal to Ammonia	.....	4.00
Available Phosphoric Acid	.....	10.00

In 100-lb. bags
100 lbs..... \$3 75 | 1,000 lbs.... \$25 50
500 lbs..... 13 25 | 2,000 lbs.... 50 00

E. Frank Coe's Columbian Corn and Potato

For corn and potatoes. (2-8-3.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	1.65
Equal to Ammonia	.....	2.00
Available Phosphoric Acid	.....	8.00
Potash (actual)	.....	3.00

In 100-lb. bags
100 lbs..... \$3 25 | 1,000 lbs.... \$22 00
500 lbs..... 11 50 | 2,000 lbs.... 43 00

E. Frank Coe's Pennsylvania Grain Special No. 1

For wheat, rye and oats. (1-10-1.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	.82
Equal to Ammonia	.....	1.00
Available Phosphoric Acid	.....	10.00
Potash (actual)	.....	1.00

In 100-lb. bags

100 lbs.....	\$3 00	| 1,000 lbs....	\$19 50
500 lbs.....	10 25	| 2,000 lbs....	38 00

16 Per Cent Acid Phosphate

Sixteen per cent available phosphoric acid. Very quick-acting and permanent.

In 100-lb. bags

100 lbs.....	\$2 50	| 1,000 lbs....	\$14 50
500 lbs.....	7 75	| 2,000 lbs....	28 00

Ground Rock Phosphate

This Phosphate is guaranteed to contain a minimum of 13 per cent Phosphorus, equivalent to 29 1/4 per cent Phosphoric Acid, and is ground to a fineness that 90 per cent will pass a 100-mesh screen, or 40,000 openings to the square inch; this fineness insuring you quick and certain results. 125 lbs. \$2; 500 lbs. \$6; 1,000 lbs. \$11; 2,000 lbs. \$20. Prices by the carload quoted on request.

Muriate of Potash

Imported, guaranteed 48 per cent K ₂ O	
1 lb. 20 cts., 5 lbs. 75 cts., 10 lbs. \$1.25.	
100 lbs.....	\$4 50
200 lbs.....	8 00
600 lbs.....	20 00
1,000 lbs....	\$31 00
2,000 lbs....	60 00

Bone Meal Fertilizer

(Formerly "Pure Raw Bone Meal")

We guarantee this brand to be manufactured strictly from slaughter-house bone.

GUARANTEED ANALYSIS		Per cent
Ammonia	.....	4.50
Phosphoric Acid	.....	21.00
Equal to Bone Phos.	.....	45.88

In 100-lb. bags

100 lbs.....	\$2 75	| 1,000 lbs....	\$20 50
500 lbs.....	10 75	| 2,000 lbs....	40 00

Lawn and Greenhouse Bone Meal

Pure; ground very fine. Especially adapted for greenhouses and lawns. Made from selected bones.

GUARANTEED ANALYSIS		Per cent
Ammonia	.....	4.50
Phosphoric Acid	.....	22.00
Equal to Bone Phos.	.....	48.07

In 100-lb. bags

25 lbs.....	\$1 00	| 500 lbs....	\$11 75
50 lbs.....	1 75	| 1,000 lbs....	22 50
100 lbs.....	3 00	| 2,000 lbs....	44 00

Nitrate of Soda

Fifteen per cent nitrogen, equivalent to over 18 per cent ammonia. 1 lb. 20 cts., 5 lbs. 75 cts., 10 lbs. \$1.25.

In 200-lb. bags

100 lbs.....	\$5 00	| 1,000 lbs....	\$35 00
200 lbs.....	8 50	| 2,000 lbs....	68 00
600 lbs.....	22 00		

Unleached Hardwood Ashes

A proper and liberal use of good Hardwood Ashes will restore worn-out lands to prime fertility, preserve grasslands through severe drought, and give trees, plants and vines renewed vigor. They purify, and strengthen the soil and help to eradicate noxious weeds from grass lands. They also prevent ravages of insects on plants and trees, increase the yield and quality of fruit, improve the flavor of berries, strengthen vines, and are indispensable in the growth of all crops which take large quantities of potash from the soil. Practical farmers tell us that unleached Wood-Ashes are worth at least double their analyzed value. 1 bbl., 200 lbs., \$3.25; 5 bbls., 1,000 lbs., \$14.; 10 bbls., 2,000 lbs. \$27. Special prices on carload lots.

IMPROVE YOUR POOR FIELDS

The greatest soil builder and honey plant yet discovered is Hubam Sweet Clover. See page 50.

Thomasville Ground Limestone

Ground Limestone is a soil sweetener and is free from injurious qualities. It is cheaper than any other lime product which can claim to be at all competitive, and is more easily handled. There has been an enormous increase in its use in recent years, keeping pace with the growing of clover and alfalfa. Where clover does not do well it is usually because of the acidity of the soil, or rather the absence of carbonate of lime or ground limestone. Limestone, while an indirect plant food, is as essential to the maximum production of some crops as is direct plant food.

We claim that Thomasville Ground Limestone is the best on the market, on account of its unusual softness which makes it very soluble. Also because it runs uniform, never falling below 97 per cent combined carbonates of lime.

We recommend the free use of Ground Limestone on Lawns.

Write for sample.

Carload—20 tons or upward, in bulk, per ton f. o. b. quarry, \$3. Less than carload lots in sacks f. o. b. cars Pittsburgh as follows:

100 lbs.....	\$1 00	| 1,000 lbs....	\$6 50
500 lbs.....	4 00	| 2,000 lbs....	12 00
5 tons, \$11 per ton			

If you will give us the name of your nearest railroad station we will quote you delivered prices in carload lots.

Sulphate of Ammonia

For nearly a half century sulphate of ammonia has been extensively used to supply nitrogen to agriculture. It has become well and favorably known in all parts of the world where fertilization is a factor in the growth of crops.

In 100 pounds of sulphate of ammonia there are 20 1/2 pounds of nitrogen. To furnish that amount of nitrogen requires about 132 pounds of nitrate of soda, 290 pounds cottonseed meal, 1,650 pounds ordinary fertilizer, or two tons of good stable-manure.

Amount to Apply. Generally speaking, an application of 100 pounds per acre may be made with profit on any crop that needs nitrogen. Larger amounts are frequently used where experience has shown that the soil and conditions are adapted to its use.

100 lbs..... \$5 00 1,000 lbs.... \$38 00

600 lbs..... 24 00 2,000 lbs.... 75 00

Special Terms on Fertilizers

On orders for ton and half-ton lots for shipment on arrival of cars in February and March, a reduction of \$2 per ton from above prices will be allowed on E. Frank Coe's brands, also on Acid Phosphate and Nitrate of Soda. Orders must be in by March 15, to secure this special reduction.

WIZARD
TRADE BRAND MARK

Sheep Manure

Successful gardeners everywhere use all the manure they can get because nothing else puts so much life and fertility into the soil.

Wizard Sheep Manure is a concentrated natural plant food and soil builder. Convenient, easy to use, and is good for everything that grows. It is carefully prepared by an extensive process of direct heat, drying, sterilizing and grinding. A safe and dependable fertilizer for finest landscape and garden use, and for all crops.

For Lawns. It promotes strong healthy growth and a bright green velvety turf. Ten pounds for each 100 square feet should be worked into the soil before seeding, or scatter broadcast over old lawn, and wet down. No weeds—no litter—quick and pleasing results are certain.

For Flowers, Shrubs, Vines, Trees, Etc. Nothing else will produce foliage and force blooming like **Wizard Sheep Manure**. It's just what nature needs to make things grow. One pound for each 10 square feet of surface well mixed into the soil before planting, and one to ten pounds dug in around vines, shrubs, trees, etc. is sufficient. Vary quantity depending on size and root development.

Wizard is better than chemical stimulants for house plants and window gardens. Mix one pound with each cubic foot of

soil for potting or a pound to 5 gallons of water and set over night for watering once a week. Remarkable results quickly secured.

Vegetables and Fruit. These require the richest kind of soil to make them pay for time and labor. **Wizard Sheep Manure** is the best fertilizer for the home gardener or professional truck and fruit grower. Apply liberally and mix deeply into the soil before planting. Use six to ten pounds for each 100 square feet. Apply as side dressing around hills and along the row during growing season. It forces growth and increases production of all kinds of vegetables and fruits. Dig it into soil around bushes, vines and trees. The effects will show in a few days.

Meadow and Field Crops. **Wizard** is finely ground and drills readily, 300 to 1,000 pounds per acre, with the seed. Puts new life into the soil, and pays \$2 for every one that it costs.

Don't plant without **Wizard**. Ask for FREE booklet.

2 lbs.....	\$0 15	50 lbs.....	\$1 50
5 lbs.....	25	100 lbs.....	2 50
10 lbs.....	45	500 lbs.....	10 50
25 lbs.....	100	1000 lbs.....	20 00

2000 lbs..... 39 00

Prices in carload lots quoted on request

STIM-U-PLANT

PLANT STIMULANT TABLET

Trade-Mark Registered in U. S. Patent Office

An All-the-Year Fertilizer for Garden and House Plants

Growers of fine flowers, shrubs and vegetables for the best markets and for exhibition, fertilize and stimulate them frequently, a little at a time. An excellent fertilizer for this purpose is **Stim-U-plantT**, an odorless, highly concentrated plant-food, in tablet form, with guaranteed chemical analysis of 11 per cent nitrogen, 12 per cent phosphoric acid, 15 per cent potash. The proportions are accurate, there is no unnecessary filler, and in this form you are able to apply plant-food exactly when and where and as needed.

Make Your Garden a Wonder Garden

These tablets increase production, heighten color and improve quality. Many professional and amateur growers use them extensively all the year round—from early spring until late fall outdoors, during the winter for pot plants, hot-house benches, etc. They are equally good for evergreens and other trees as for a small fern, petunia or other potted plant.

Stim-U-plant Tablets

can be used in tablet form, or dissolved in water at the rate of one tablet to the quart. Complete directions with every package.

Tomato plants are easily fertilized by putting **Stim-U-plantT** Tablets under them every ten days.

For the cabbage plants which lag behind use **Stim-U-plantT** Tablets and see them catch up.

Stim-U-plantT Tablets make it possible to feed each plant as it needs it.

Order **Stim-U-plantT** Tablets with your seed and plant order. Price, 10 tablets for 15 cts., 30 for 25 cts., 100 for 75 cts., 1,000 for \$3.50, postpaid.

Walker's Excelsior Plant Food



THE ESSENCE
OF PLANT-LIFE

For
House Plants
and
Flower-
Gardens

An **odorless** preparation, combining in a concentrated and soluble form every element required in plants and flowers to produce vigorous growth and a profusion of flowers and fruit. Wonderful results are obtained after one or two applications. It is **immediately soluble in water**, and available to plant-life from the moment of application.

Walker's Excelsior Plant Food

assists in retaining moisture. Will mature plants from two to three weeks earlier. Where the plant food has been used, boll weevil, cutworms, and wireworms cannot live.

Sold in powdered form and is used dry or by dissolving in water.

2 1/4-oz. can, 15 cts.; postpaid.....	\$0 20
5-oz. can, 25 cts.; postpaid.....	35
12-oz. can, 40 cts.; postpaid.....	55

LIME-FERTILE

The Inoculated Soil-Builder

Puts nitrogen-gathering bacteria into the run-down soil, together with the food which makes them fatten and multiply for the benefit of the soil and crop. It sweetens the soil while supplying directly or indirectly the essential elements of plant-life.

PRICES
5 lbs..... \$0 25 | 100 lbs..... \$2 00

INSECTICIDES AND FUNGICIDES

The Insecticides and machines for applying the same, described in this catalogue, are not novelties in the experimental stage, but have been thoroughly tested and found reliable for the uses for which they are intended.

Customers using large quantities of Insecticides are requested to write to us for special prices, specifying the quantities wanted. Prices quoted are subject to change.



Grasselli's Arsenate of Lead Paste

Arsenate of Lead is a neutral insecticide. It destroys all leaf-eating insects, will not be washed off by rains, and will not burn the most delicate foliage. Contains 15 per cent arsenic oxide and 35 per cent lead oxide, assuring customers of a superior grade of effective poison, conforming in quality to the new insecticide law. 1-lb. can 35 cts., 5-lb. keg \$1.50, 10-lb. keg \$2.25, 20-lb. keg \$4.00, 50-lb. keg \$8, 100-lb. keg \$14, 300-lb. bbl. \$39.

Grasselli's Arsenate of Lead Powder

This product may be mixed with water and applied as a liquid spray, or it may be used as a dust spray. If used in the dust form, it may be applied as received, by finely dusting on the foliage, or it may be mixed with an equal bulk of freshly burned wood ashes or powdered lime. ½lb. 30 cts., 1 lb. 50 cts., 5 lbs. \$2, 10 lbs. \$3.25, 20 lbs. \$5.50, 50 lbs. \$12.50, 100 lbs. \$24, 200 lbs. \$44.

Grasselli's Lime and Sulphur Solution

Grasselli's Lime-Sulphur Solution is a clear, cherry-colored liquid. It will, if not exposed to the air, remain in solution a long time. Will not clog the spray pumps, because it is free from sediment.

FALL AND EARLY SPRING SPRAY
To destroy San José scale, peach leaf curl (apply just before buds burst), bud moth, apple aphid, blister mite, peach worm, any scale insects or bark lice, etc., mix one gallon Grasselli's Lime and Sulphur Solution with each 7 to 9 gallons of water.

SUMMER SPRAY
For apple scab, leaf spot, and similar fungous diseases on apples and pears, use one gallon to 40 or 50 gallons of water.

Qt. 45 cts., 1-gal. can 90 cts., 5-gal. can \$3.25, 25 gals. (half bbl.) per gal. 34 cts.; 50-gal. bbl., per gal. 30 cts. For each empty barrel returned to us at Pittsburgh, freight paid, in good condition, \$1.50 will be refunded, and \$1 for each half barrel.

Bordeaux Mixture Powder

Preventive of blight on potato, celery plants, etc. For fungous diseases on nursery stock, rust, molds, leaf spot, leaf blight, mildew, black and brown rot, in fact, all fungous diseases. ½lb. 30 cts., 1 lb. can 50 cts., 5-lb. keg \$1.80, 10-lb. keg \$2.80, 20-lb. keg, \$4.75, 50-lb. keg, \$10.50, 100-lb. keg, \$20.

Glidden Dry Lime-Sulphur

Glidden Dry Lime-Sulphur is an improved, standard spray material that has been perfected by the Glidden Company. It is simply a more practical form of liquid lime-sulphur which, for years, has been known by growers as an effective spray material.

HOW YOU USE IT

Glidden Dry Lime-Sulphur will control San José Scale and other scale insects. It is effective against apple scab, peach leaf curl, leaf blister mite, brown rot of peach or plum and other fungous diseases that you have controlled in the past with liquid lime-sulphur.

For the usual dormant spray against scale insects such as San José scale, oyster shell scale, etc., from 10 to 15 pounds to 50 gallons of water should be used.

For summer spraying against fungous diseases that have been successfully controlled with liquid lime-sulphur on seed fruits, from 2 to 3 pounds of Glidden Dry Lime-Sulphur, dissolved in 50 gallons of water, will be found effective. The usual amount of dry powdered arsenate of lead should be added for controlling leaf-eating insects where a combination spray is desired.

For summer spraying on stone fruits, the fungous diseases which have been successfully controlled with liquid lime-sulphur, use from 1½ to 2 pounds of Glidden Dry Lime-Sulphur dissolved in 50 gallons of water. Where a combination insecticidal and fungicidal spray is desired, the usual amount of dry powdered arsenate of lead should be added to the mixture.

Where only a small quantity is needed for dormant spraying, from eight to ten level tablespoonsfuls to a gallon of water will be found effective. For summer spraying on seed fruits, as indicated above, from one to two level tablespoonsfuls to a gallon should be used.

PRICES

1 lb.	\$0.30	100 lbs.	\$13.00
5 lbs.	1.25	200 lbs.	24.00
25 lbs.	4.00		

"An ounce of prevention is worth a pound of cure" applies to the use of insecticides. Get the bugs before they get your plants.

Led-Bor

A perfect combination of Arsenate of Lead and a special bordeaux mixture containing a high percentage of available copper. It is a rich, smooth, creamy paste containing 2 per cent metallic copper and 25 per cent of arsenate of lead. The adhesive properties of the arsenate of lead augment those of the bordeaux mixture content, forming the most adhesive combination of spraying materials known to agriculturists.

It is an insecticide and offers one of the best means available for combating leaf-eating insects such as most surface chewing beetles and caterpillars. When properly used it will prove effective against potato bugs, apple codlin moths, tomato worms, grape and berry moths, gypsy moths, web worms, flea beetles, leaf beetles, tent caterpillars, and many similar insects.

1 lb.	\$0.45	25 lbs.	\$7.50
5 lbs.	2.00	50 lbs.	14.00
10 lbs.	3.50	100 lbs.	25.00

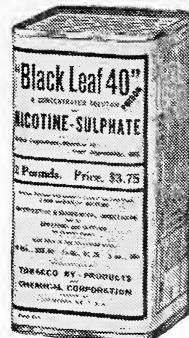
Black-Leaf 40

Nicotine-Sulphate (40 per cent Nicotine Guaranteed)

Black-Leaf 40 is highly recommended by experiment stations and by spraying experts throughout the United States and the Dominion of Canada.

The standard contact insecticide for spraying vegetables, fruits, flowers and plants to destroy aphid, thrips, leaf-hoppers, and similar "sucking" insects. Also effective for dipping purposes. Full directions with every package.

1-oz. bottle.	\$0.35	2-lb. can.	\$3.75
½lb. can.	1.25	10-lb. can.	15.50



Nicotine for Spraying

Purest and most economical. Death to aphid or green fly, thrip and many other forms of flower, fruit and vegetable lice. 30 per cent strength. 1 oz. 25 cts., 2 ozs. 40 cts., ½lb. \$1.25, lb. \$2, 4 lbs. \$7.25, 8 lbs. \$12.50.

Copper Sulphate (Blue Vitriol)

Lb. 20 cts., 5 lbs. 75 cts., 10 lbs. \$1.25, 50 lbs. \$5.50, 100 lbs. \$10.

Commercial Flour Sulphur

For use in making lime-sulphur solution and for dusting. 1 lb. 10 cts., 5 lbs. 40 cts., 10 lbs. 60 cts., 25 lbs. \$1.25, 50 lbs. \$2, 100 lbs. \$3.50, 500 lbs. \$15.



Bug Death

Prevents Blight and Kills Bugs
Free from Paris Green or Arsenic

The favorite among truckers and gardeners for over twenty years for chewing insects on potatoes, tomatoes, squashes, cucumbers, cabbages, melons. No danger of arsenical injury to plants, bees, birds or humans. Bug Death is a fine powder which may be applied dry or in water.

1-lb. pkg....\$0 20	12½-lb. pkg....\$1 40
3-lb. pkg....40	100-lb. pkg....8 75
5-lb. pkg....60	

Bug Death Aphis

A new companion preparation to regular Bug Death, especially for Sucking Insects, Lice and Aphis, and particularly for use on Fruit Trees, Berry Bushes, Grape Vines, House Plants. Likewise a fine, tenacious powder, applied dry or in water. Ready for use in dust form just as it comes in the package. No Paris Green or Arsenic.

12-oz. pkg....\$0 20	80-lb. keg....\$8 75
10-lb. pkg....1 40	150 lbs....16 00



Hammond's Slug-Shot

The old reliable remedy for currant worms, cabbage worms, caterpillars and other insects that destroy vines and plants.

A light, composite, fine powder, distributed either by duster, bellows, or in water by spraying. Reliable in killing currant worms, potato bugs, cabbage worms, chicken lice, slugs, sow bugs, etc., and it is also strongly impregnated with fungicides.

1-lb. pkg....\$0 20	25 lbs. in 5-lb.
5-lb. pkg....55	packages. \$2 50

A REAL MAGGOT REMEDY

Protects Your Crops

against the ravages of the destructive root maggot, and other garden pests, making it possible to get fine crops of

**Radishes Turnips Cabbage
Onions Kale Cauliflower**

Also eradicates earth-worms from lawns and putting-greens. Easily applied and is not in any way injurious to plant life, but is a valuable stimulant and fertilizer.

Every gardener knows that it is practically impossible to grow radishes, kale, cabbage, onions, turnips, or cauliflower under ordinary conditions, and that the few remedies that have been tried in the past are either unreliable or too troublesome and expensive to be used by the average gardener. As a result, in many sections of the country they have almost given up trying to grow these vegetables, knowing only too well that maggots and other pests would eat half the crop and spoil the other half.

But "Mag-o-tite" has changed all this. It is a remedy that has absolutely proved all we claim for it and so wonderful are the results obtained by its use that the manufacturers are finding it a big problem to keep up with the demand.

IN POWDER FORM, READY FOR USE



A 2-pound package is the approximate quantity required for about 300 feet of drill, or, for field culture, 300 to 500 pounds per acre. Prices via express or freight f. o. b. Pittsburgh.

2-lb. pkg.....	\$0 35	25-lb. sack.....	\$2 50
4-lb. pkg.....	60	100-lb. sack.....	8 50
8-lb. pkg.....	1 00		

Send for folder of full directions



Melrosine

Why Raise Roses to Feed Bugs?



Melrosine, the only remedy endorsed by leading authorities. The General Contact Insecticide that Kills Rose-Bugs and other insects. Used with any good spray-pump, diluted with from 20 to 25 parts of water. Pleasant and harmless to use. Guaranteed effective when used according to directions on can. Gal. \$6, ½-gal. \$3.25, qt. \$1.75, pt. \$1. Trial Size 50 cts., by mail or express at customer's expense. Trial Size, or sufficient to make one gallon when diluted, and care for several plants for the season, postpaid for 60 cents.

MELROSINE—IT KILLS ROSE BUGS

Whale Oil Soap

With Tobacco

Kills most lice and sucking insects on trees, shrubs, plants, vines, and rose bushes. It is better than fish soap or soap which contains no tobacco. 1 lb. 35 cts., 5 lbs. \$1.60.

Lemon Oil

For mealy bug, brown and white scale on palms and rubber plants, thrip, red spider, caterpillar, black and green fly, fleas and skin diseases on dogs and other animals, and insects in poultry houses. ½ pt. 30 cts., pt. 50 cts., qt. 90 cts., gal. \$2.75.

Paris Green—Strictly Pure

½-lb. box 15 cts., ½-lb. box 25 cts., 1-lb.
box 45 cts., 5 lbs. \$2.



Kills maggots infesting cabbage, onions, turnips, cauliflower, beets, radishes, etc. The spray is easily applied. Simply add the necessary water and stir. It emulsifies freely and will not settle. Apply with an ordinary hand sprinkler. It has proved a remarkable success in increasing the yield of cabbage, cauliflower, turnips, radishes, onions, beans, beets, etc.

Pt.....\$0 65	½ gal.....\$1 50
Qt.....1 00	Gal.....2 50

Pure Powdered Hellebore

For destroying insects on plants, currant bushes, etc. ½-lb. box 20 cts., ½-lb. box 30 cts., 1-lb. box 55 cts.

Aphis Punk, for Fumigating

Specially prepared for greenhouses and conservatories. It vaporizes the nicotine economically and evenly. Nothing keeps a house free from aphid, thrip and other plant parasites so thoroughly and cheaply. Case of one dozen air-tight containers, one dozen sheets each, \$9.50. One dozen sheets, in air-tight package, \$1.

Tobacco Dust

Lb. 10 cts., 5 lbs. 30 cts., 10 lbs. 50 cts., 50 lbs. \$1.50, 100 lbs. \$2.50.

Powdered Tobacco, 25 cts. per lb.

Tobacco Stems

Bale (about 90 lbs.) \$2, 3 bales \$5.25, 10 bales \$15.

Pyrox

REG. U. S. PAT. OFF
TRADE MARK REGISTERED

chemically blended with the copper fungicide which increases the effectiveness of both.

It saves labor; it is easy to use, simply mix with cold water, and spray.

It goes farther; it is so smooth and fine that the finest nozzle can be used without clogging. The resulting mist-like spray covers more surface.

It gives more thorough protection. It should be put on with fine nozzle because when applied in the finest mist it covers more thoroughly every part of the leaf or fruit.

It gives more lasting protection; it sticks like paint and stays on for weeks. Even hard rains do not wash it off once it is thoroughly dry. It helps to increase yields; the copper fungicide in Pyrox stimulates the leaves, makes them greener and more vigorous and helps to increase yields even when there is no disease.

1-lb. jar.....	\$0 40	10-lb. drum.....	\$2 50	50-lb. drum.....	\$10 00	300-lb. barrel.....	\$51 00
5-lb. drum.....	1 50	25-lb. drum.....	5 75	100-lb. keg.....	18 00		

At Last, A Perfect Spray

SPRAY-TABS

BORDEAUX-ARSENATE TABLETS

Insecticide and fungicide in tablet form

An entirely new departure in insect control and the prevention of disease among plants. The most convenient way. No more home mixing of offensive, poisonous ingredients from bulk packages; no more improper preparation of spray solution. Spray-Tabs solve the spraying problem. The one spray for all general garden use. Dispense with bulk spray materials and use Spray-Tabs for all leaf-eating or chewing insects and the prevention of plant diseases. The making of an insecticide and fungicide in combination in tablet form marks a new era in spraying.

PREVENT PLANT DISEASES WHILE FIGHTING INSECTS

Spray-Tabs combine convenience, reliability, and economy in a modern, efficient, and accurate insecticide and fungicide. The plant-grower has never before had the advantage of spray materials in tablet form. All that is needed to make an ideal spray for garden crops is to put the required number of tablets in a specific amount of water, agitate the solution and apply it to the plants. There is no opportunity to improperly make the solution.

Order them with your seed and plant order, that pest control may begin with garden-making. Thirty tablets for 30 cts., postpaid 35 cts. Complete directions for every use with each package.

Tree Wound Paint

Tree-Wound Paint is the one ideal material, embodying all the qualities required in tree surgery operations—antiseptic and penetrating, forming a lasting, waterproof coating which does not injure or interfere with the growth or healing of the wound. Qt. 75 cts. (postpaid 85 cts.); gal. \$2.50, 5 gals. \$11.50, 10 gals. \$22.

What Pyrox Is and What Pyrox Does

A powerful fungicide; it controls fungous diseases, even some serious ones that other fungicides do not control.

A strong poison insecticide; it kills chewing insects, even those which are hard to kill, like the hard-shelled potato beetle.

Over twenty years of practical farm use have proved Pyrox the most effective remedy against both serious fungous diseases and chewing insects. It contains the essential copper in proper quantity for safe use and in most active form for greatest fungicidal value. In Pyrox the poison insecticide is



Tree Tanglefoot

Tree Tanglefoot is a sticky compound similar to that used in making fly-paper. It is easily applied and is the most effective and economical protection for fruit, shade and ornamental trees against all crawling insects.

One pound makes about 10 linear feet of band. One application remains sticky three months and longer and remains effective rain or shine. Won't soften, won't run or melt, yet always elastic, expanding with growth of tree. No mixing required; use exactly as prepared by us. Applied with a wooden paddle. Will not injure trees.

Endorsed by prominent park and cemetery superintendents, foresters and horticulturists.

For tree surgery, Tree Tanglefoot is superior to anything on the market.

Lb. 50 cts., postpaid 55 cts.; 5 lbs. \$2.25, postpaid \$2.40; 10 lbs. \$4.25, postpaid \$4.45; 20 lbs. \$8, postpaid \$8.25.

Grafting Wax

For grafting or for cuts and bruises on trees. $\frac{1}{2}$ lb. pkg. 20 cts. (postpaid 30 cts.); lb. pkg. 35 cts. (postpaid 45 cts.).

Formaldehyde

For wheat and barley smut, use one pint of Formaldehyde in 40 gallons of water. Sprinkle or dip seed in tubs; cover several hours; sow damp. For oat smut, spray oats with one pint Formaldehyde in 10 pints of water. Sack or sow.

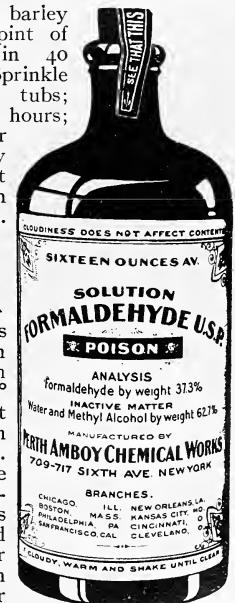
FOR POTATO SCAB AND RHIZOCTONIA

Soak potatoes two minutes in warm solution (118° to 122° Fahr.) of 1 pint Formaldehyde in 15 gallons water. Small lots on the stove in wash-boiler; larger lots in tank heated with tank heater or by steam from tractor or other boiler.

Treat Soil with Formaldehyde to overcome root rot of most vegetables (U. S. Bulletin No. 217). Will prevent onion smut, lettuce rosette and rot, tobacco bed-rot, and damping-off fungi.

Lb. bottle 40-cts., 10-lb. bottles \$3.50, 50-lb. bottles \$15, 60-lb. keg, \$12.

Ask for booklet and full directions.



Hammond's Weed Killer

Hammond's Weed Killer has been in use for many years, and has held a useful place in all tidy towns to prevent the growth of weeds along gutters, paths or tennis-courts. Will, naturally, kill any kind of grass without distinction, so it must be used cautiously where grass is desired. Qt. 65 cts., gal. \$1.50, 5 gals. \$6.25, 10 gals. \$11.

SCALECIDE

THE COMPLETE DORMANT SPRAY

SCALECIDE

"Makes a Tree Outgrow Its Troubles"

Eighteen years ago Scalecide was first made to control scale, and was for years the only satisfactory remedy. Later, other preparations were made to kill scale, but in all these years no product has been made that controls so many other orchard troubles as Scalecide. Its unequalled effectiveness against diseases and insects that winter on the tree has established its reputation as "*the complete dormant spray*."

Scalecide controls pear psylla, when applied in the fall, by killing the adults before they lay their eggs. (After they have laid their eggs in the spring it is too late.) Scalecide also controls fire blight by penetrating the diseased tissues and killing the hold-over canker from which fire blight is spread. It controls aphid, too, when applied in the spring as a delayed dormant spray. Leaf roller, bud moth, case bearer, collar and root rot are other pests that this complete dormant spray will take care of. It spreads so readily that it covers every part of the trunk and branches of the tree, gets into the cracks and crevices, and completely smothers insects and eradicates disease.

It Invigorates Tree-Growth and Increases Yield

The invigorating effect of Scalecide is noted in increased terminal growth, larger, darker foliage on bearing trees, and the holding of the foliage later in the fall, thus accumulating starch and sugar which results in a plumper fruit-spur and insures a larger crop the following year. Those who have used Scalecide and lime-sulphur side by side for several years

claim that Scalecide gives a greater yield of fruit—in one case, 58 per cent more. Even a 2 per cent increase over the average yield will pay the entire cost of spraying with Scalecide, including material, labor, and depreciation of apparatus. Profitable crops can be grown only on healthy and vigorous trees.

Reduces the Cost of Labor

Though Scalecide costs more per gallon than lime-sulphur this is much more than offset by the saving of material and labor. One barrel of Scalecide, making 800 gallons of spray, will cover, until they drip, as many trees as three and a half barrels of lime-sulphur, which make 1,600 gallons of spray. And of course you can apply 800 gallons of Scalecide in much less time than 1,600 gallons of lime-sulphur.

A Pleasure to Use It

Scalecide is soothing and antiseptic to the skin; it does not even injure the eyes; it is non-poisonous to man or beast; and being an oil, it makes the pump run easier and does not clog the spray nozzle. *It is surely a pleasure to use it!*



PRICES

1 qt.....	\$0 60
1-gal. can.....	1 45
5-gal. can.....	6 45
10-gal. can.....	11 00
30-gal. bbl.....	27 00
50-gal. bbl.....	39 50

SULFOCIDE

A Better Summer Spray

You have been looking for a better summer spray for garden or orchard—one that does not cause russetting or undue dropping of fruit, gives higher color and smoother skin. We have it.

Mr. Herbert Myrick, editor-in-chief of a prominent group of farm papers, says: "This spring I sprayed my apples for fungous pests and leaf-eating insects with Sulfocide and Cal-Arsenate. The large crop of winter fruit we now have is the smoothest, fairest and freest from worms, scab, stings or other defects of any that we have ever had."

Sulfocide is not a bordeaux or lime-sulfur mixture but it has to a large extent the effectiveness of both without the drawbacks of either. It does not combine with arsenate of lead or paris green but does combine with Cal-Arsenate without forming a sludge like lime-sulfur and arsenate of lead. Sulfocide does not dwarf fruit or potatoes and is almost insoluble when once dry.

Cal-Arsenate is an arsenate of lime and one-third stronger than the best arsenate of lead. Never use Cal-Arsenate on peaches, plums or other stone fruits.

Sulfocide is very effective in controlling brown rot of peaches. Use one gallon to 200 gallons of water and add 3 or 4 pounds of ordinary soap first dissolved in hot water. This can be used up to picking-time without showing on the fruit. The same proportion may be used in the garden and on roses (2 ounces of Sulfocide and 1 ounce of soap to 3 gallons of water). This also stops rot on grapes.

Nicotine Sulphate may be added for plant-lice.

For apples and pears use one gallon of Sulfocide and 2 pounds of Cal-Arsenate to a 200-gallon spray-tank. For potatoes, one gallon Sulfocide and 3 pounds of Cal-Arsenate to a 150-gallon spray tank.

SULFOCIDE

1-pint can.....	\$0 50
1-quart can.....	75
1-gallon can.....	2 25
5-gallon keg.....	8 75
10-gallon keg.....	15 00
30-gallon barrel.....	39 00
50-gallon barrel.....	60 00

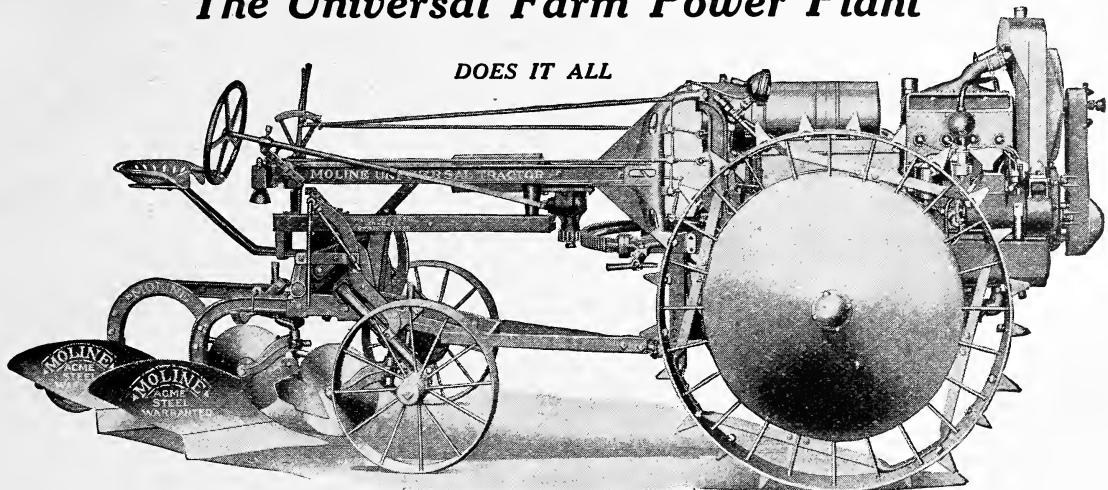
CAL-ARSENATE

1 lb.....	\$0 50
5 lbs.....	2 00
10 lbs.....	3 25
20 lbs.....	5 50
50 lbs.....	13 00
100 lbs.....	25 00

MOLINE

The Universal Farm Power Plant

DOES IT ALL



The Moline Universal Tractor does all belt- and field-work, including cultivating, with ONE MAN.

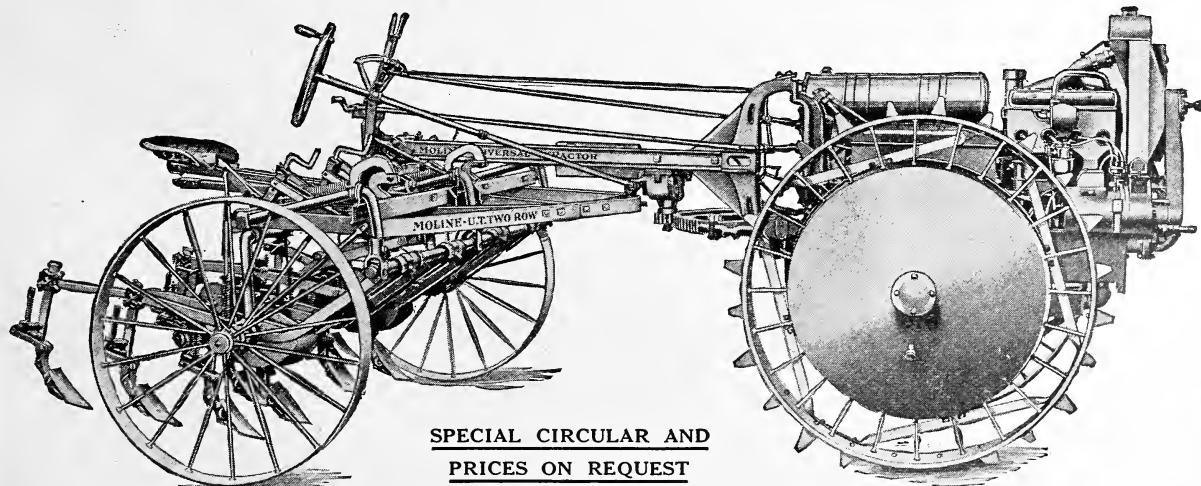
Its exclusive features enable you to do your season's work with less horse- and man-labor, and at less expense.

Its reliability, reserve power and economy of operation have given it an unrivaled reputation for dependable performance.

It represents the ultimate in Farm Tractors.

If you want to make a profitable investment in farm power, come in and look at the MOLINE. And remember that—

If desired you can use the "drag behind" or horse-drawn implements you now have with the MOLINE tractor the same as with other types of tractors.



SPECIAL CIRCULAR AND
PRICES ON REQUEST

You are cordially invited to call at our store and acquaint yourself with the features that make the Moline Universal Tractor supreme in the farm tractor field. We welcome the opportunity to demonstrate.

On
the Job
Every
Day



Saves
Work
Time
and
Money

BEEMAN ONE-HORSE TRACTOR

Write for catalogue giving detailed information

Cultivates onions, carrots, beets, and other vegetables grown in narrow rows—one or three rows at a time—better, closer and quicker than hand wheel hoes. It cultivates corn, potatoes, beans, tobacco, etc., and does it much quicker and better than can be done with a horse, because it can keep up a faster pace all day in hot or cool weather.

Pulls one-horse plow, one-horse disc, Acme or smoothing harrow, and horse lawn-mower.

Power on Belt is four horse-power, which is sufficient to run all small machinery requiring power used on the farm. It goes from one job to another on its own power.

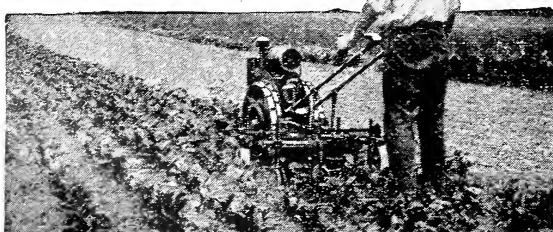
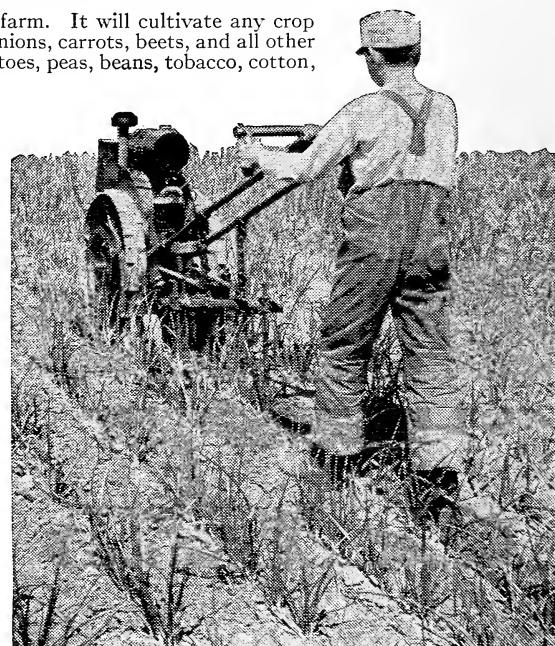
As a Garden Tractor it is fully as efficient as its big brother on the farm. It will cultivate any crop now cultivated by a hand wheel or one-horse cultivator. In cultivating onions, carrots, beets, and all other vegetables grown in narrow rows, it goes *astride*; in cultivating corn, potatoes, peas, beans, tobacco, cotton, berries, etc., it travels *between* the rows.

All garden hoes, weeders, cultivators, teeth, knives, discs, etc., of standard make, such as you have been using in your hand cultivator, can be very easily attached to the tool frame in rear of the machine. Attachments are provided for operating between rows and these can be adjusted to fit rows of different widths.

It has more uses for belt work than we have room to speak of. A few of the principal uses are—running the washing machine, churn, cream separator, feed grinder, fanning mill, pump, etc. The Beeman will do anything that a four horse-power stationary engine can do and take itself to its work, too.

A handy man can fix up an endless number of attachments for the Beeman. Its usefulness is limited only by the amount of work there is to be done on the farm.

Price,
\$325



The
Tractor
of
Universal
Usefulness



Two
Cylinder
Six Horse
Power
—
Easy to
Operate

THE NEW BRITAIN TRACTOR

Price, \$375

The New Britain Tractor plows, harrows, discs, furrows, covers, marks, ridges, seeds, cultivates, weeds, hauls fertilizer distributors, mowing-machines, hay-rakes, lawn-mowers, lawn-rollers, or small wagons. It drives wood-saws, feed-grinders, corn-shellers, ensilage-cutters, or other power-driven machinery requiring up to six horse-power.

The New Britain Tractor is a most economical power unit for the following users:

For the large-acreage farmer for cultivating rowed crops, light hauling, and belt-work.

For the farmer with the smaller place and for the suburbanite, the New Britain Tractor will do all work including plowing.

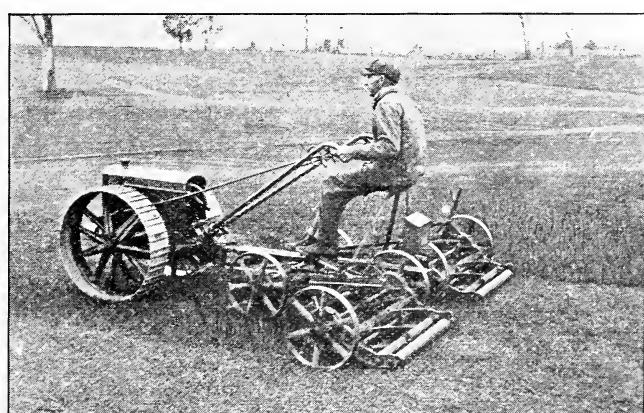
For large estates, municipal parks, institutional grounds, golf clubs, tennis clubs, baseball parks, or any other place where the upkeep of grounds is a large item of expense.



For the larger vegetable grower for hauling multiple seeders, multiple weeders, and multiple cultivators.

The New Britain Tractor: Two cylinder, six horse-power.

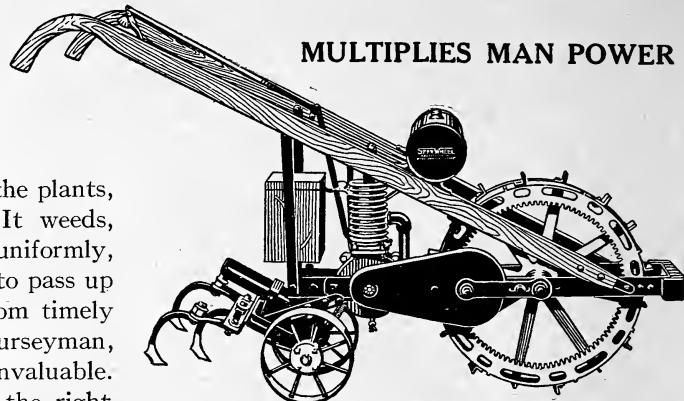
Write to us for literature and full information.



SPRYWHEEL

GARDEN TRACTOR

No matter how narrow the row or how tall the plants, Sprywheel cultivates at all stages of growth. It weeds, mulches, hoes, and hills so easily, so quickly, so uniformly, and so economically that no grower can afford to pass up the extra yield and extra profits that come from timely and thorough cultivation. The truck farmer, nurseryman, florist, and the home gardener find Sprywheel invaluable. It enables each to do the necessary work at the right time and as often as desirable.



MULTIPLIES MAN POWER

Price { Including 3 Cultivator Teeth, 1 pair 6-inch Hoes, and 1 pair Adapter Plates. } \$150

SPECIFICATIONS

Length over all.....	63 inches	Engine, Air-cooled, 2-cycle, $2\frac{1}{2} \times 2\frac{1}{2}$ inches.
Traction Wheel, diameter.....	20 inches	Ignition. Non-vibrating Coil to operate with <i>Three</i> No. 6 Dry Cells.
Traction Wheel, face.....	3 $\frac{1}{2}$ inches	Gasoline Tank. Capacity one gallon.
Rear Truck Wheels, diameter.....	9 inches	Weight complete..... 135 lbs.
Rear Truck Wheels, face.....	2 inches	

What Those Who Have Tried Out the "Spry Wheel" Say About It:

"What every gardener or estate owner ought to have."
"The best money-maker a market gardener ever had offered to him."

"It is the greatest time-saver we have on the place."
"You can surely recommend it to your best friends."

ASK FOR SPECIAL CATALOGUE

THE GROMOR CULTIVATOR

The Gromor Cultivator will eliminate all the hand cultivation which is being done by the various hand cultivators.

It is so constructed that it will cultivate in rows as narrow as 12 inches and will do the work much faster and better than possibly can be accomplished by the hand cultivators.

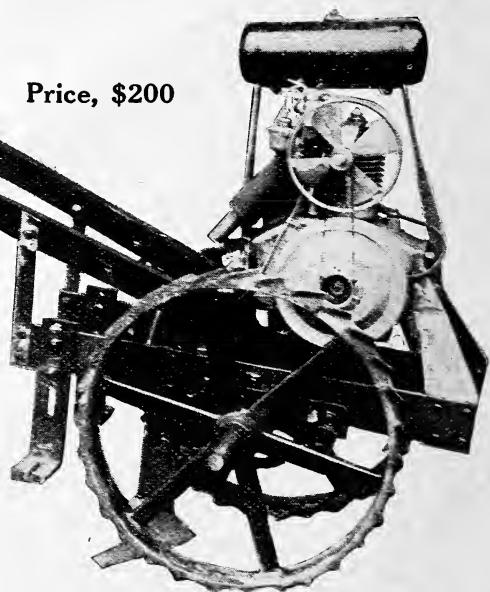
Further, it is so constructed that you have a good clearance and also an excellent view of the rows beneath the machine.

The tractor is equipped with a four-cycle, one-cylinder, air-cooled motor, equipped with a high-tension magneto and a carburetor that has no adjustments, which makes it fool-proof. It is so simple to operate that you can place it in the hands of any of your help who understands the working of a double-wheel plow and rest assured he will be able to do a good day's work.

Power. A one-cylinder, four-cycle, air-cooled motor, which is geared eight to one within itself and then drives with a chain drive, geared two to one, and a gear drive of four and one-half to one, which makes a very powerful machine.

Stability. The low center of gravity and the clearance make operation easy.

Price, \$200



Here is given a side view of the tractor, with the weeding hoes, or knives attached. Special descriptive circular sent on request.

WIARD PLOWS

The Wiard Plows have been continuously manufactured since 1804. Their history has been a record of constant improvement in efficiency, strength and durability, and they are today recognized as leaders in this class of Agricultural Implements.

The real quality of an implement is shown, not by what its makers claim for it, but by the results which it gives in the hands of the average user. Therefore, go to the farmer, whom you consider fair and without prejudice, and see what he says about Wiard Implements; in other words, "Ask the man who owns one." Space will permit of our showing but a few of the leading styles adapted

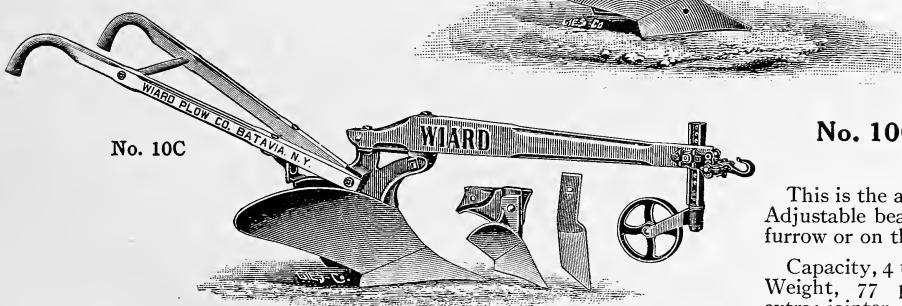
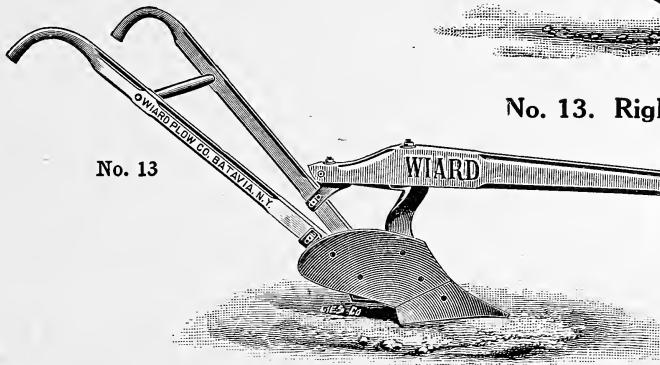
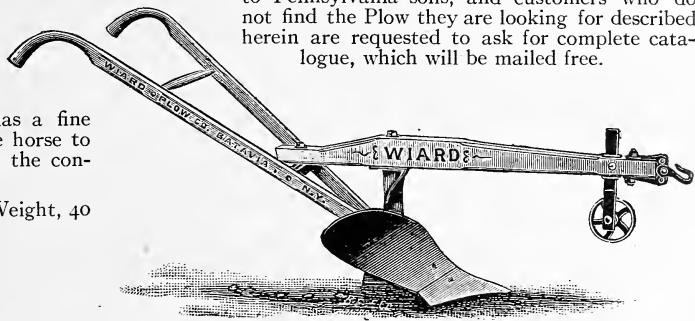
to Pennsylvania soils, and customers who do not find the Plow they are looking for described herein are requested to ask for complete catalogue, which will be mailed free.

WIARD ONE-HORSE PLOWS

No. 62. Right-Hand, Chilled Moldboard

This is the smallest Wood Beam Wiard Plow. It has a fine turning moldboard and an adjustable beam, allowing the horse to walk in the furrow or on the land; is light, strong, and the construction is perfect.

Capacity, 3 to 5 inches deep, 6 to 8 inches wide. Weight, 40 pounds. Plain, \$6; wheel, \$1.50 extra.



No. 13. Right-Hand, Chilled Moldboard

A medium-sized one-horse plow adapted to all soils. Has adjustable Beam. Handles can be raised or lowered.

Capacity, 4 to 6 in. deep, 6 to 9 inches wide, Weight, 52 pounds. Plain, \$8; wheel, \$1.50 extra.

No. 10C. Right-Hand, Chilled Moldboard

This is the acme of perfection in one-horse Plows. Adjustable beam so that the horse can walk in the furrow or on the land

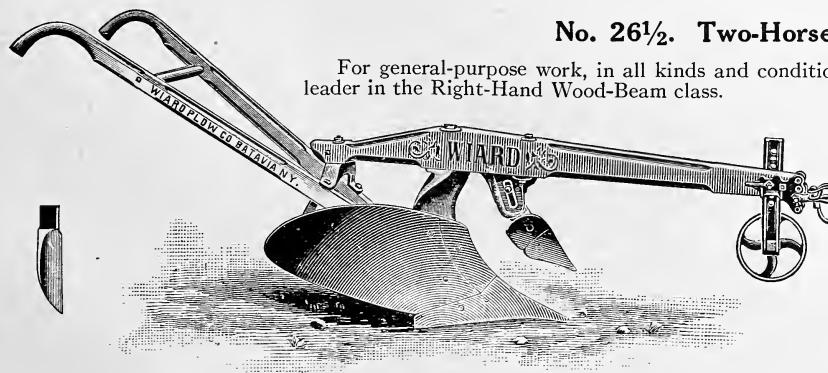
Capacity, 4 to 7 inches deep, 6 to 11 inches wide. Weight, 77 pounds. Plain, \$10; wheel, \$1.50 extra; jointer, \$2.75 extra.

WIARD TWO-HORSE PLOWS

The Plows shown on this and the following pages are constructed with special reference to obtaining the greatest strength with least weight. They have been thoroughly tested by hundreds of farmers in all kinds and conditions of soil and are unexcelled for general-purpose work.

No. 26½. Two-Horse, Right-Hand

For general-purpose work, in all kinds and conditions of soils, this plow cannot be excelled. A leader in the Right-Hand Wood-Beam class.



Capacity, 5 to 8 inches deep, 10 to 14 inches wide, weight, 115 pounds. Plain, \$15.75; wheel, \$2 extra; jointer, \$4 extra; steel moldboard, \$1.75 extra.

A full line of extras for Wiard, Oliver, Gaie, and South Bend Plows always in stock. Accept none but the "Genuine."

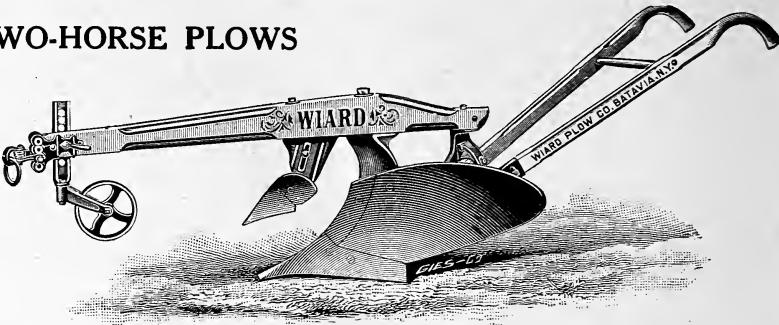
WIARD TWO-HORSE PLOWS

Two-Horse, Left-Hand

One of the old reliables and a leader yet. Light draft. Greatest strength with least weight.

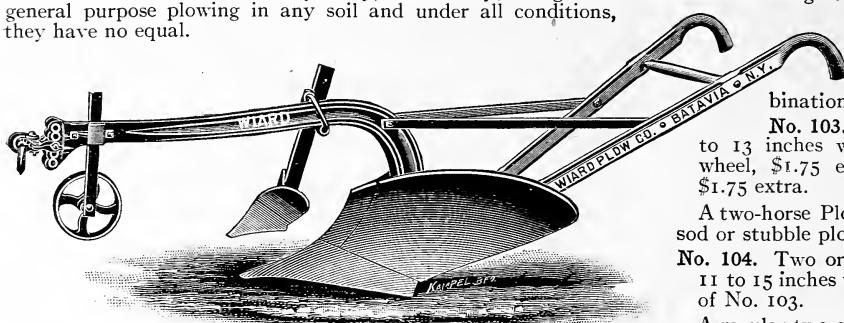
No. 27. Capacity, 6 to 8 inches deep, 10 to 14 inches wide, weight, 105 pounds. Plain, \$15.75; wheel, \$2 extra; jointer, \$4 extra; steel moldboard, \$1.75 extra.

No. 28. Capacity 7 to 9 inches deep, 12 to 16 inches wide, weight 112 pounds. Add \$1 to prices of No. 27.



WIARD PATENT STEEL-BEAM PLOWS

This series of Plows is the "acme of perfection" in Plow construction. They are made to wear and from the best material obtainable are balanced so as to handle very easily, run steadily; are light in draft and have a large capacity and superior turning qualities. For general purpose plowing in any soil and under all conditions, they have no equal.



No. 43. Right-Hand. Same capacity, size and price as No. 103 Left-Hand.

No. 44. Right-Hand. Same capacity, size and price as No. 104, Left-Hand.

Nos. 103 and 104 Left-Hand

The latest "New Pattern" series of combination, grooved steel-beam, general purpose Plows.

No. 103. Two-horse. Capacity, 4 to 7 inches deep, 9 to 13 inches wide. Weight, 120 pounds. Plain \$14.50; wheel, \$1.75 extra; jointer, \$4 extra; steel moldboard \$1.75 extra.

A two-horse Plow of medium capacity, and suited to either sod or stubble plowing.

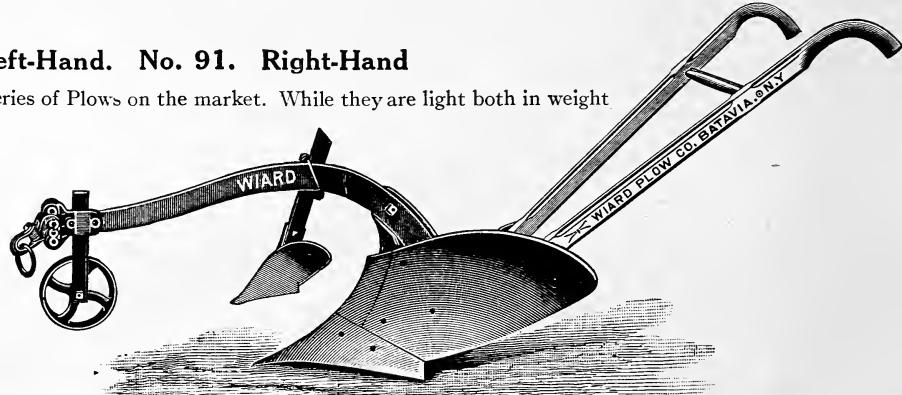
No. 104. Two or three-horse. Capacity, 5 to 8 inches deep, 11 to 15 inches wide. Weight, 130 pounds. Add \$1 to prices of No. 103.

A regular two or three-horse Plow, suited to all soils.

No. 81. Left-Hand. No. 91. Right-Hand

This is one of the most popular series of Plows on the market. While they are light both in weight and draft, they are very strong. The moldboards have superior turning qualities, and they are adapted to all conditions of soil. They are so balanced that they handle easily. They have great strength and wearing qualities and far outlast many other Plows which are sold at a higher price, which explains the great popularity they have attained.

Capacity, 5 to 8 inches deep, 10 to 14 inches wide. Weight, 128 pounds. Plain, \$15; wheel, \$1.75 extra; jointer, \$4 extra; steel moldboard, \$1.75 extra.



WIARD ROAD OR CONTRACTORS' PLOWS

The Wiard line of Road and Contractors' Plows is unexcelled. They are made in different sizes, and are used extensively in Township Road Work, Excavating and Grading.

A special Catalogue and prices will be mailed on request.

PLOW REPAIRS

In considering the purchase of a Plow, one of the important questions always is

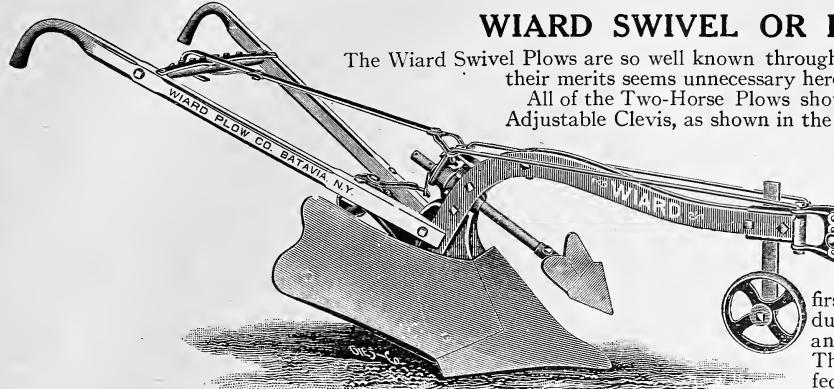
"Where can I get repairs?"

We carry in stock a full line of extras for all the plows we sell, and our customers do not lose valuable time waiting for repair parts coming from distant factories.

WIARD SWIVEL OR HILLSIDE PLOWS

The Wiard Swivel Plows are so well known throughout Pennsylvania that a detailed account of their merits seems unnecessary here.

All of the Two-Horse Plows shown here are furnished with either Common or Adjustable Clevis, as shown in the illustration.



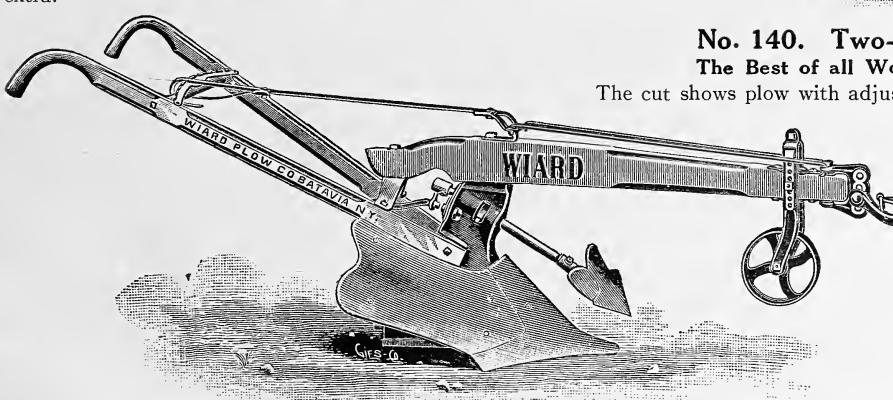
No. 120. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 118 pounds. \$1.75 extra; jointer, \$4 extra; colter, \$4 extra; steel moldboard \$1.75 extra.

WIARD WOOD BEAM SWIVEL PLOWS

No. 21. One-Horse Hillside Plow, Chilled Moldboard

By an ingenious but simple clevis attached to these Plows they can be used with horse walking in the furrow, a great convenience for garden and vineyard work.

Capacity, 4 to 7 inches deep, 6 to 10 inches wide. Weight 77 pounds. Plain, \$11.25; wheel, \$1.50 extra; steel moldboard, \$1.25 extra.



This plow has about the same capacity as the No. 140, the wearing parts being the same except the shoe. The outlines are somewhat different, as shown by the cut, and the Plow is lighter. It can be fitted with either cast-iron or soft center-steel moldboard, adjustable clevis and adjustable automatic colter. This Plow has been on the market for many years and has stood the test of time. The cut shows Plow with common clevis. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 104 pounds. Plain, \$13.50; adjustable clevis \$1.50 extra; wheel, \$2 extra; steel moldboard, \$1.75 extra.

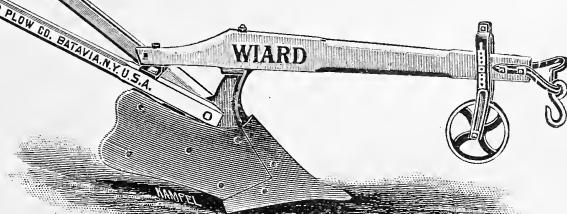
Wiard Plows have been manufactured continuously since 1804

WIARD STEEL-BEAM SWIVEL PLOWS

The Wiard Plow Co. has always had the reputation for making the best Hillside plow on the market. These are the first practical Steel-beam Swivel Plows ever produced. The beams are of highest grade forged steel, and are stronger than any other beam made. They are so adjusted that the Plow works perfectly when reversed either way, and all the parts are attached in the simplest but strongest manner.

Plain, \$17, adjustable clevis, \$1.50 extra; wheel,

No. 126. Capacity, 5 to 8 inches deep, 12 to 15 inches wide. Weight 139 pounds. Add \$1 to prices of No. 120.

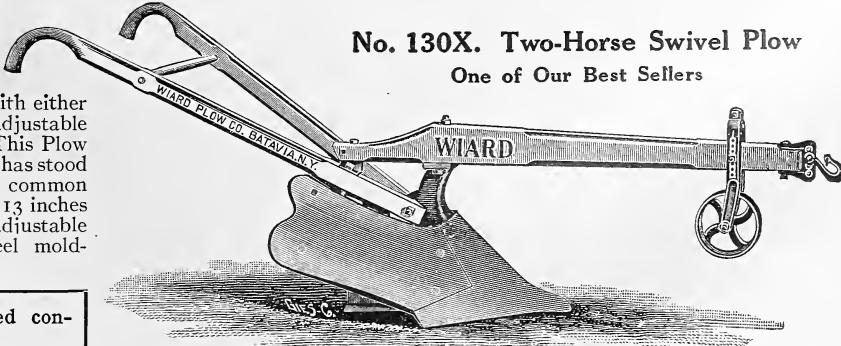


No. 140. Two-Horse Swivel Plow The Best of all Wood-Beam Swivel Plows

The cut shows plow with adjustable clevis and jointer. This is the most superb of all Wood-Beam Swivel Plows. It has a strong, high standard and long shoe, making it one of the most steady running Plows in our list. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 115 pounds. Plain, \$14; Adjustable clevis, \$1.50 extra; wheel, \$2 extra; jointer, \$4 extra; colter, \$4 extra; steel moldboard, \$1.75 extra.

The Wiard leads in Swivel Plows

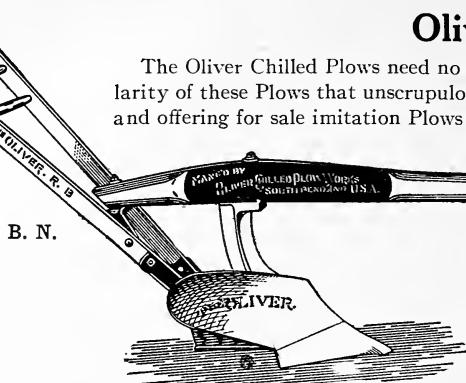
No. 130X. Two-Horse Swivel Plow One of Our Best Sellers



Oliver Chilled Plows

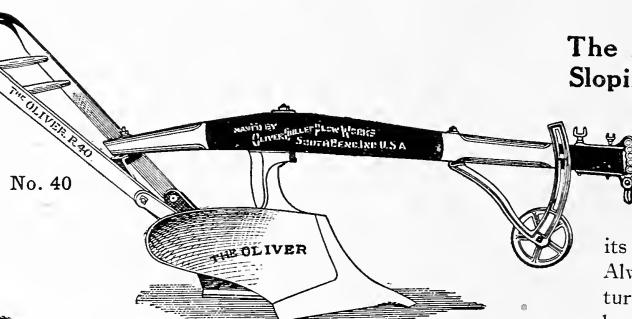
The Oliver Chilled Plows need no introduction to the Pennsylvania farmer. So great is the popularity of these Plows that unscrupulous parties are seeking to trade upon their good name by making and offering for sale imitation Plows and parts as genuine.

We have space to show but a few of the leading favorites among Pennsylvania farmers, but will send a complete catalogue on request. A full line of genuine Oliver repairs always in stock.



The "B N" Wood-Beam, Full Chilled, Sloping Landside. Right-Hand Only

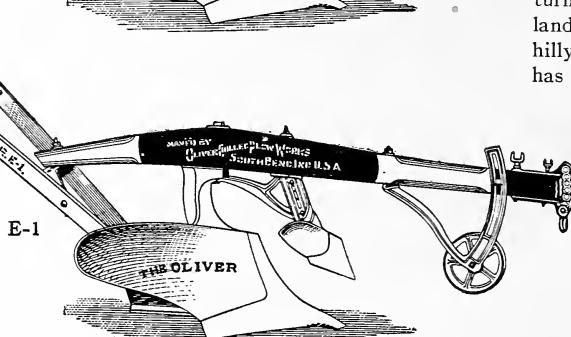
The "BN" Plow is a light one-horse Plow. It will turn a furrow 5 x 10 inches, and is a prime favorite.



The No. 40 N Wood-Beam, Full Chilled, Sloping Landside Right- and Left-Hand

This is the veteran Plow of the Oliver line and for many years it has been familiar to a majority of the farmers in America.

The No. 40 N is a two- or three-horse Plow, first-class in all respects and immensely popular, its sales exceeding those of any other Plow in use. Always reliable, its great capacity, steady running and turning qualities, make it valuable in sandy or alluvial lands, and on farms containing a variety of soils. On hilly land it is unrivaled, and for a general-purpose Plow has no equal. It will turn a furrow 9 x 16 inches.

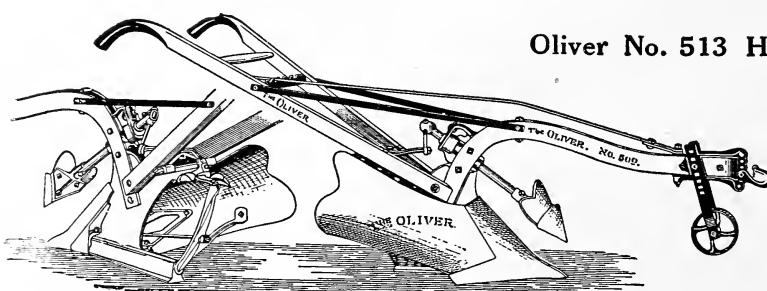


The E-1 N Wood-Beam Only, Full Chilled, Sloping Landside, Right- and Left-Hand

The E-1 N Plow is a very popular heavy two-horse or light three-horse plow, and intended for general-purpose work. Capacity. 7 x 14 inches.

Oliver No. 513 Hillside, Steel-Beam Plow

Capacity 5 to 8 in. deep, by 12 to 15 in. wide



The above illustration shows a new and very neat pattern of hillside plow, which possesses so many valuable features as to make it a leader of its class. It is lined to work perfectly when reversed either way and all the parts are attached in the simplest yet strongest manner. Light in weight, light in draft and the shape and turning qualities are A-1. Bottoms are long, insuring steadiness and ease of handling.

Prices of Oliver Chilled Plows

No.	Beam	Hand	Wheel Jointer			No.	Beam	Hand	Wheel Jointer		
			Plain	Extra	Extra				Plain	Extra	Extra
A-2	—Wood Right, 1-Horse	.....	\$8 00	\$1 50	\$3 25	E-1-N	—Wood R or L, 2-Horse	.....	\$18 00	\$2 25	\$3 50
B-N	—Wood Right, 1-Horse	.....	9 00	1 50	3 25	83	—Steel Left, 2-Horse	.....	14 50	1 75	4 25
10-N	—Wood Right, 1-Horse	.....	11 50	1 50	3 25	84	—Steel R or L, 2-Horse	.....	15 75	1 75	4 25
13-N	—Wood Right, 1-Horse	.....	13 00	1 50	3 25	51	—Wood Hillside, 1-Horse with Beam Shifter.	10 50	1 50	3 00	
20-N	—Wood R or L, 2-Horse	.....	15 75	2 25	3 50	512	—Steel Hillside, 2-Horse	.....	17 50	1 50	3 00
40-N	—Wood R or L, 2-Horse	.....	18 00	2 25	3 50	513	—Steel Hillside, 2-Horse	.....	18 75	1 50	3 00
	—Steel R or L, 2-Horse	.....	18 00	2 25	3 50	24	—Iron, Right	.....	21 00	2 00	3 50

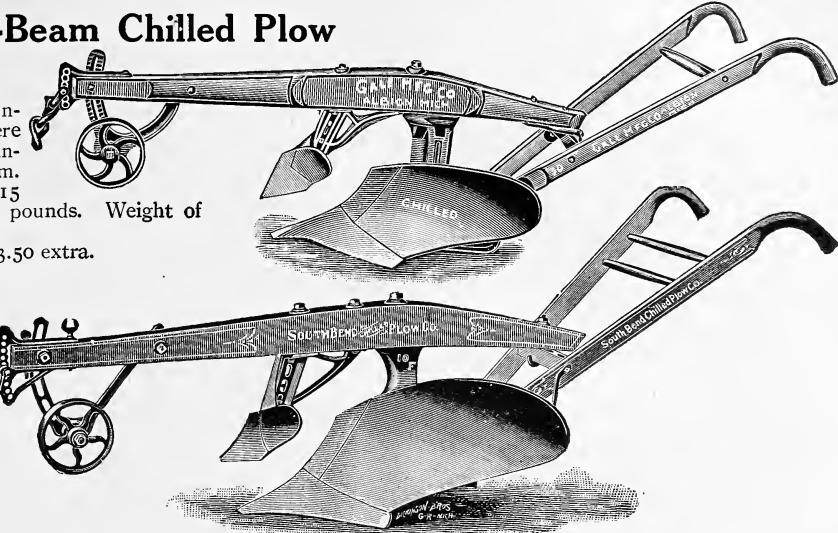
Gale Wood-Beam Chilled Plow

No. 30. Left-Hand

One of the most popular plows. It is unexcelled as a general purpose Plow, and there are hundreds of them in use in western Pennsylvania. We can highly recommend them.

Capacity $6\frac{1}{2}$ to $7\frac{1}{2}$ inches deep, 13 to 15 inches wide, weight as shown above, 132 pounds. Weight of plain Plow, 106 pounds.

Plain, \$15; wheel, \$1.75 extra; jointer, \$3.50 extra.



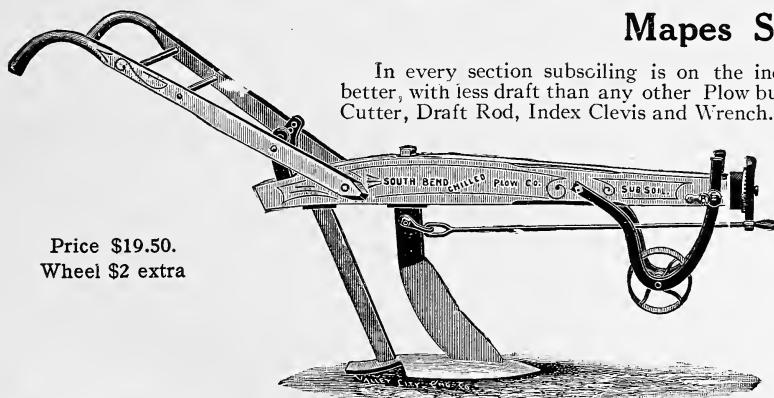
South Bend Chilled Plows

10-F South Bend Plow

South Bend Plows have been used with unvarying success for the past twenty years and are favorably known throughout western Pennsylvania.

The 10-F Plow shown above is made in Right-and Left-Hand with Chilled Moldboard and is a great favorite among plowmen. It has a high moldboard and great furrow capacity.

South Bend Plows	Wood-Beam	Steel-Beam	Wheel Extra	Jointer Extra
No. 1-B—One-Horse, Right-Hand	\$7 75		\$1 35	\$3 50
No. 4 —Two-Horse, Right- or Left-Hand	15 00	\$15 00	1 75	3 50
No. 10-F—Two-Horse, Right- or Left-Hand	16 25	16 25	1 75	3 50
No. 15 —Two-Horse, Right-Hand	17 50		1 75	3 50
No. 302 —One-Horse, Hillside	11 00		1 35	3 50
No. 306 —Two-Horse, Hillside	17 50		1 75	3 50



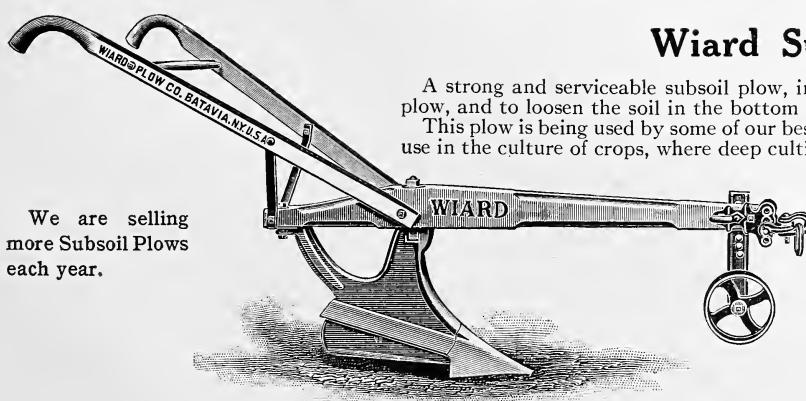
Price \$19.50.
Wheel \$2 extra

Mapes Subsoil Plow

In every section subsoiling is on the increase. We believe the Mapes will do the work better, with less draft than any other Plow built. Fitted with heavy Beam, forged Steel Shoe and Cutter, Draft Rod, Index Clevis and Wrench.

It is intended to follow an ordinary breaking Plow, loosening and exposing the subsoil to atmospheric influences to the depth of 10 to 14 inches and leaving the ground in the best possible condition to retain moisture, and the crop to withstand drought. Where the subsoil is inferior in fertility to the surface this treatment is preferable to trench plowing. Made in Wood Beam only.

Much used by nurserymen for root-pruning, and preparing soil for cultivation of grapes. Requires two to four horses, according to depth.



We are selling
more Subsoil Plows
each year.

Wiard Subsoil Plow

A strong and serviceable subsoil plow, intended to follow in the furrow of the turning plow, and to loosen the soil in the bottom of the furrow from three to six inches deep.

This plow is being used by some of our best practical farmers, and is especially adapted for use in the culture of crops, where deep cultivation gives the best results. For ditching purposes it has no equal.

Right-Hand, Sub-Soil. Weight 106 pounds.
Plain, \$13; wheel, \$2 extra.

A full line of Extras for the Wiard, Oliver, Gale and South Bend Plows always in stock. Accept none but the "Genuine."

The Wiard Reversible or Two-Way Sulky Plow

This Sulky is adapted to all soils, leaves no ridges or dead furrows and does perfect work on either level land or side hill.

It is very simple, easy to handle and is lightly constructed, the material used being mostly steel and malleable iron, making it very strong and durable.

As shown in the illustration, there are two Plows, one right- and one left-hand, both operated by separate levers and having an automatic power lift which can be operated by the driver from the seat either by the use of a trip lever operated by the foot, or by a hand trip lever which can be operated by the driver either when riding or walking. The Plows have the highest grade chilled iron or soft-center steel moldboards, and either forged steel or cast iron points as ordered, and can be fitted with joiner or plain colter, as desired.

The Pole Shifter is operated by a hand lever, which enables the plowman while riding or walking to shift the pole either to the right or left at any angle desired, to suit the team and get the proper width of furrow, either on flat land or side hill, without side draft.

The Automatic (Power Lift) Foot Trip operated as follows: The Plow is lifted from the furrow by the team while in motion, by pressure of the foot on the trip lever, until the Plow begins to lift and the lever moves forward, which will then release and lock itself in place. The lift can also be operated by hand by the driver, either from the seat when riding or when walking behind. It unlocks by pressure of the foot on the foot trip or by hand by pressure of the upper rear handle of dog, lowering the Plow.

The Sulky is perfectly balanced so that whether the operator is on the seat or following the Plow there is absolutely no weight on the horses' necks. The seat can be adjusted so as to allow it to be leveled when plowing on side hill, throwing the weight of the operator towards the upper wheel, giving comfort and ease to the driver.

The Oliver No. 23 Reversible Sulky Plow

The No. 23 Sulky Plow is fitted with No. 84 bottom s, right and left, capacity about 8 by 16 inches, chilled or steel moldboards.

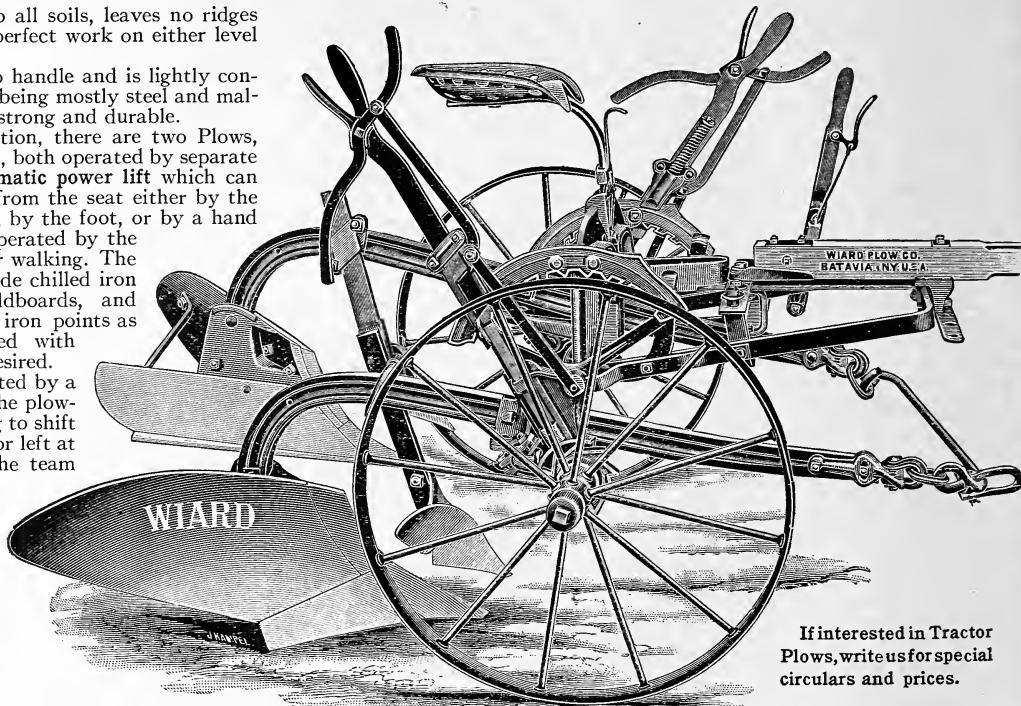
In sections where this Plow has been used, it has become very popular, which has been proved by the sales which have grown by leaps and bounds.

By means of the "horse-lift" which is brought into play by simply pressing forward slightly on the foot-trip, the operator's work is diminished by fully one-half and it is not necessary to lean away back in an uncomfortable and often unsafe position to use the hand lever. With this Plow the operator can keep his eyes on his team and his hands on the reins, the feet only are needed in order to raise the Plow.

Second only to this important improvement is the simple and easily operated tilting device connected with the seat of this sulky, which when plowing along hillside while the machine is, of course, leaning down hill, makes it very easy for the operator to keep a level seat and maintain the equilibrium of the Plow.

Additional distinct points of advantage are the most approved and convenient guiding lever most effectively applied, and the greater range of pole-shift for hillside plowing. The turntable on beam makes it possible to land the plow to suit any and all conditions—changing the Plow for use with two or three horses is a simple and easy matter—a draft device is provided that is sure to work satisfactorily—and the hitch never fails to operate correctly.

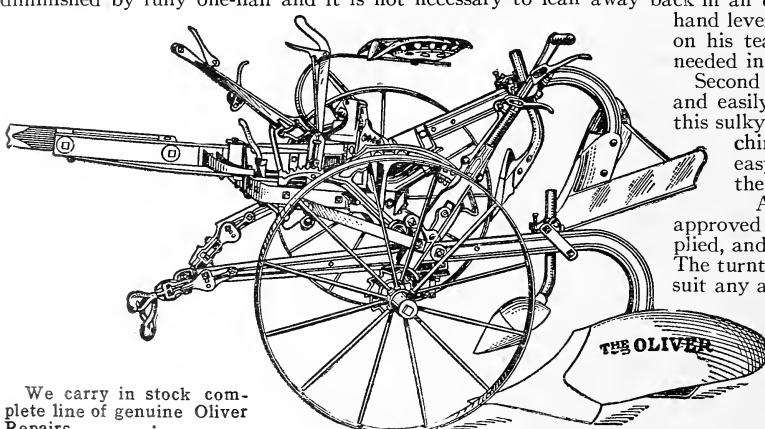
Complete with chilled moldboards, chilled shares, jointers or rolling colters, either two or three-horse hitch, \$80; with steel moldboards, \$6 extra.



If interested in Tractor Plows, write us for special circulars and prices.

The Double Sulky can be fitted with the following bottoms: Nos. 43 right and 103 left. Cuts 4 to 7 in. deep, 9 to 13 in. wide. With chilled or steel molds. Nos. 44 right and 104 left. Cuts 5 to 8 in. deep, 11 to 15 in. wide. With chilled or steel molds.

No. 400. Two- or three-horse. Weight 550 lbs. Complete with chilled moldboards, jointers, or plain colters, cast-iron points, two- and three-horse hitch, \$75; fitted with steel moldboards, \$4.50 extra; fitted with forged steel points, \$9 extra. Ask for Special Circular.



We carry in stock complete line of genuine Oliver Repairs



Double Action Disc Harrows

Made in Regular and Extension Heads
and in sizes for all

The illustration shows the Clark "Cutaway" Double Action—Regular. Observe that this machine is built with all four gangs attached to one rigid main frame. The rear discs are held so that they cut and pulverize the soil between the furrows cut by the fore discs. All the soil over which the machine passes is thoroughly worked. Moreover, the soil thrown outward by the fore discs is thrown back by the rear discs and the surface of the land is left level. This Clark "Cutaway" Double Action Harrow constantly works at leveling the ground, cutting down the high places, filling in the hollows, leaving a seed-bed in both places.

Also observe the compactness of this Harrow. The length of the entire load (that is, the distance from the hitch to the extreme rear end of the machine) in the Clark "Cutaway" Double Action is about one-half the length of the load in the tandem and trailing types. The draft is, therefore, but one-half to three-fourths as much as in these substitute machines of corresponding size.

There is no tongue truck on this machine. There is absolutely no use for it; yet nothing is sacrificed. Instead, money is saved the buyer.

The discs on all Clark "Cutaway" machines are made of special cutlery steel, and forged sharp. Either cutaway or solid discs are furnished. The quality and price are the same. Unless solid discs are specified, all machines are equipped with cutaway discs.

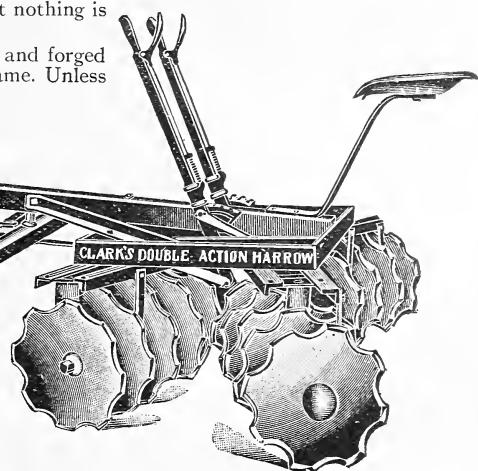
The bearings are the famous Clark hardwood, soaked in oil.

Note the jointed pole, which may be attached or detached in one minute, making it possible to use the Harrow either as a tongueless or a tongue machine at any moment.

The Clark "Cutaway" Double Action—Extension Head—is the same as the Clark "Cutaway" Double Action—Regular—shown in the illustration, making it possible to extend the gangs out beyond the team for orchard cultivation. They close up for general work.

PRICES

	Regular Heads	Extension Heads
A-4, 16 16-in. discs, double action, two-horse hitch, 4½ ft. cut.	\$55 25	\$59 25
A-5, 20 16-in. discs, double action, three-horse hitch, 5½ ft. cut.	66 25	70 75
A-6, 24 16-in. discs, double action, four-horse hitch, 6½ ft. cut..	73 75	78 75
X-4, 16 18-in. discs, double action, three-horse hitch, 4½ ft. cut..	68 75	71 50
X-5, 20 18-in. discs, double action, three-horse hitch, 5½ ft. cut..	76 75	81 25
X-6, 24 18-in. discs double action, four-horse hitch, 6½ ft. cut..	88 75	93 75



If two-horse hitch is wanted in place of three, or three-horse hitch in place of four, deduct \$1 from the above prices.

Descriptive catalogue and prices on other sizes of double action and reversible single action Harrows mailed on request

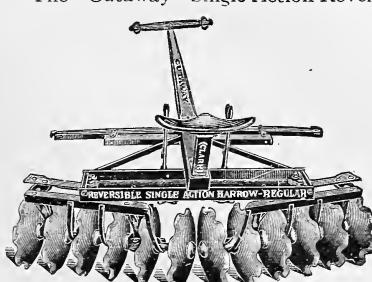


Reversible Single Action Harrow

The Clark "Cutaway" Single Action Harrow was built up to a standard measured by actual field conditions of the most severe type. Observe in the illustrations that the head is built directly on top of the gangs. Note the tongue, seat, braces and levers are all fastened to it, thereby making the discs carry the entire weight of the machine. This construction gives such a perfect balance that there is practically no weight on the horses' necks, and makes the use of the tongue truck optional with the user. Without a tongue truck the hitch is placed back close to the machine and the draft is the very minimum.

The "Cutaway" Single Action Harrow is reversible; that is, the gangs can be swung end for end, so that the soil may be thrown either out or in. To reverse, it is only necessary to pull the cotter pins that hold the lever links, drop the links, swing the gangs around and reattach links.

The "Cutaway" Single Action Reversible Extension-Harrow can be extended for orchard or vineyard work. This reversible feature is important to the orchardist. It makes it possible for him to ridge the land and level it as he desires. He can throw the soil to his trees at one cultivation and away at the next, or it can be closed up for regular field work in a few minutes. No extra parts are needed in shifting gangs out or back.



PRICES

	Steel Head	Steel Head
A-5. 10 16-inch discs, 2-horse hitch, Regular.....	\$36 25	\$38 00
A-6. 12 16-inch discs, 3-horse hitch, Regular.....	40 75	43 75
X-5. 10 18-inch discs, 2-horse hitch, Regular.....	39 50	41 75
X-6. 12 18-inch discs, 3 horse-hitch, Regular.....	47 00	49 25

If Wood Head is wanted instead of Steel Head, deduct \$1 from above prices.

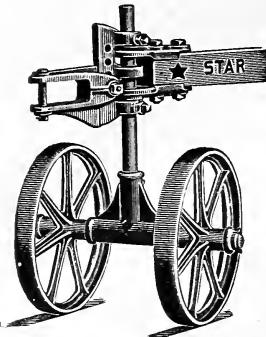
If Tongue Truck is wanted instead of the Long Pole, add \$6 to above prices.

If both Tongue Truck and Long Pole are wanted add, \$7.50 to above prices.

Clark "Cutaway" Tractor Harrows

The Clark "Cutaway" Tractor Harrow was the first disc built especially for tractors. It was a success from the first, because every important feature in it has been tested out for years in the horse machine. The Clark "Cutaway" is a *has-made-good* Engine Harrow. It is of the Clark "Cutaway" double action type with such changes as have been found essential to give absolutely perfect service in tractor use.

Write for special catalogue and prices of Tractor Harrows.



Fore Truck

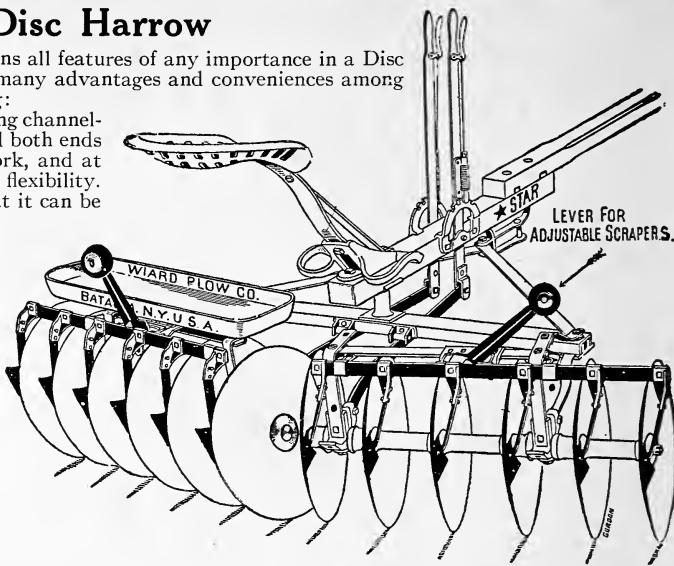
Rollers. Anti-friction rollers over the draw irons, by which the gangs can be placed at any angle without strain or friction and with least power.

Three-Horse Offset. This offset is bolted to the short or rear part of the pole and extends to the right, the long pole being then bolted to the right-hand side of the offset; this brings the middle horse directly in the center of draft and no side draft results.

Complete Machine. The whole is excellently finished and made with every modern improvement and convenience, and is operated with greatest ease for man and team.

Width	No. of Discs	Sizes of Discs	Description	Equipments Furnished	Without Steel Weight Boxes	Add for Steel Weight Boxes
3 ft.	6	16 in.	1-horse.....		\$29 75	\$1 50
4 ft.	8	16 in.	Small 2-horse.....	2-horse	31 25	2 25
5 ft.	10	16 in.	Light 2-horse.....	2-horse	34 25	2 50
6 ft.	12	16 in.	2- or 3-horse.....	2- or 3-horse	38 00	2 50
7 ft.	14	16 in.	Heavy 2- or 3-horse.....	2- or 3-horse	41 75	2 75
8 ft.	16	16 in.	Heavy 2- or 3-horse.....	2- or 3-horse	45 00	2 75
5 ft.	10	18 in.	2-horse.....	2-horse	37 25	2 50
6 ft.	12	18 in.	Heavy 2- or 3-horse.....	2- or 3-horse	41 50	2 50
7 ft.	14	18 in.	Heavy 2- or 3-horse.....	2- or 3-horse	46 25	2 75
8 ft.	16	18 in.	3- or 4-horse.....	3- or 4-horse	49 50	2 75

All of above prices are for Harrows with scrapers and long poles, without fore trucks and neck-yokes. If neck-yoke is wanted add \$1 to above prices. Harrows with fore truck instead of long pole, \$6.50 extra; with both fore truck and long pole, \$7.75 extra. Fore truck, when purchased separately, \$8.50. No extra charge for three-horse equipment. Ask for special circular.



Star Disc Harrow

The Star Disc Harrow contains all features of any importance in a Disc Harrow and includes, besides, many advantages and conveniences among which we mention the following:

Frames and Braces. The strong channel-steel frame and braces that hold both ends of each gang down to their work, and at the same time give the desired flexibility.

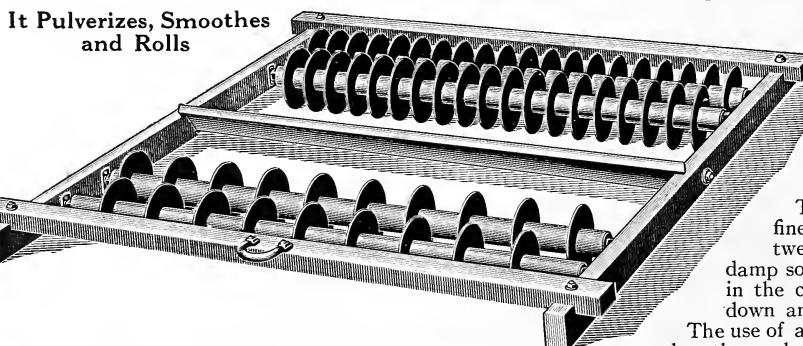
Seat. A seat so arranged that it can be adjusted for a light or heavy driver and all excess of weight taken off the horses' necks.

Pole. A pole so raised that the whiffletrees can be hung under it where they belong without any inconvenience.

Three-Horse Offset. This offset is bolted to the short or rear part of the pole and extends to the right, the long pole being then bolted to the right-hand side of the offset; this brings the middle horse directly in the center of draft and no side draft results.

Complete Machine. The whole is excellently finished and made with every modern improvement and convenience, and is operated with greatest ease for man and team.

It Pulverizes, Smoothes and Rolls



marks in telling how he prepared an onion bed, "once lengthwise and once crosswise will usually fit a field in better shape than many times over with any other tool." After the Meeker Harrow has gone over the land it looks as if a garden rake had been used.

Every farmer who has one or more acres of fine seed under cultivation needs a Harrow that eliminates hand-raking—one that makes the soil as fine as dust. No matter what kind of soil it is the Meeker Harrow prepares it perfectly for fine seeding—a perfection that no other implement approaches.

MAKES THE HEAVIEST SOIL FINE AND SMOOTH

The Meeker Smoothing Harrow is a perfect pulverizing and smoothing Harrow and land-roller combined.

As the illustration shows, it has four sets of rollers containing 46, 58 or 82 discs, depending upon the size, the discs being set so as to overlap or meet.

These discs grind up all lumps, leaving the soil fine and smooth. The discs of one roller work between those of the other. This prevents clogging in damp soil and makes the seed-bed very fine. The board in the center, set at an angle, can be adjusted up and down and serves as a leveler.

The use of a Meeker Harrow saves the work of raking, and does the work of a dozen men. As one experienced farmer re-

4-ft. 6in. x 4-ft. Harrow, with 46 8-in. discs, 175 lbs....	\$24 00	8-ft. x 6-ft. Harrow, with 82 8-in. discs, 300 lbs....	\$36 00
6-ft. 8in. x 6-ft. Harrow, with 58 8-in. discs, 200 lbs....	27 00	8-ft. x 6-ft. Harrow, with 82 10-in. discs, 350 lbs....	40 00
6-ft. 8in. x 6-ft. Harrow, with 58 10-in. discs, 250 lbs....	32 00		

Also a very valuable implement for golf-courses. Ask for special circular.

PRICES

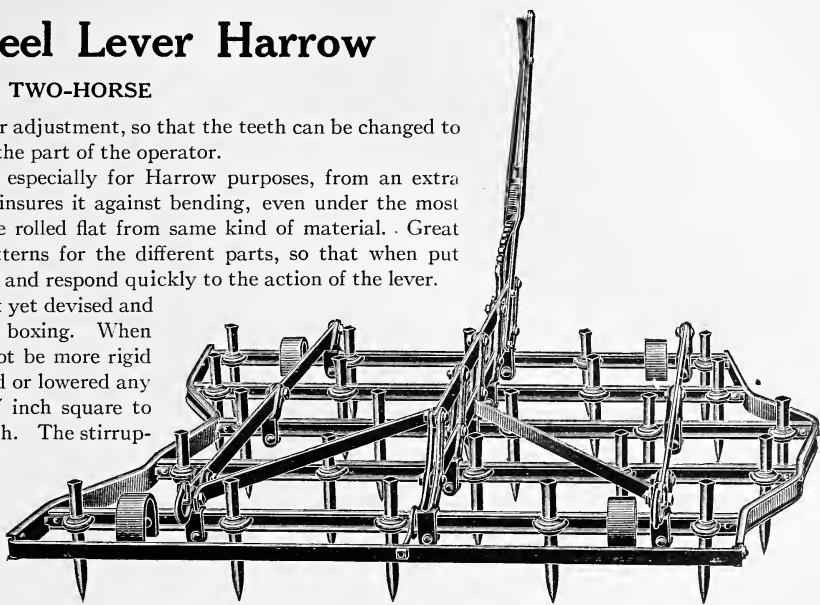
“Columbian” Steel Lever Harrow

ONE- AND TWO-HORSE

The Columbian Harrow is made with lever adjustment, so that the teeth can be changed to any slope quickly and with little exertion on the part of the operator.

The main-bars are U-shaped, and made especially for Harrow purposes, from an extra quality of steel, very high in carbon, which insures it against bending, even under the most severe strain. The cross-bars and braces are rolled flat from same kind of material. Great pains have been taken in preparing the patterns for the different parts, so that when put together they will be free from “lost motion,” and respond quickly to the action of the lever.

The tooth-clamp is without doubt the best yet devised and consists of stirrup bolt and back and front boxing. When fastened with this device, the teeth would not be more rigid if a part of the bar itself. Teeth can be raised or lowered any distance, and any size can be used, from $\frac{1}{2}$ inch square to $\frac{3}{8}$ inch square. Furnished with $\frac{1}{16}$ -inch teeth. The stirrup-bolt clamp is fixed to take the common stock teeth carried by all dealers. It is securely braced and nicely finished. One-horse, with 25 teeth, one section, \$13; two-horse, with 50 teeth, two sections, \$22; two horse, with 60 teeth, two sections, \$24.

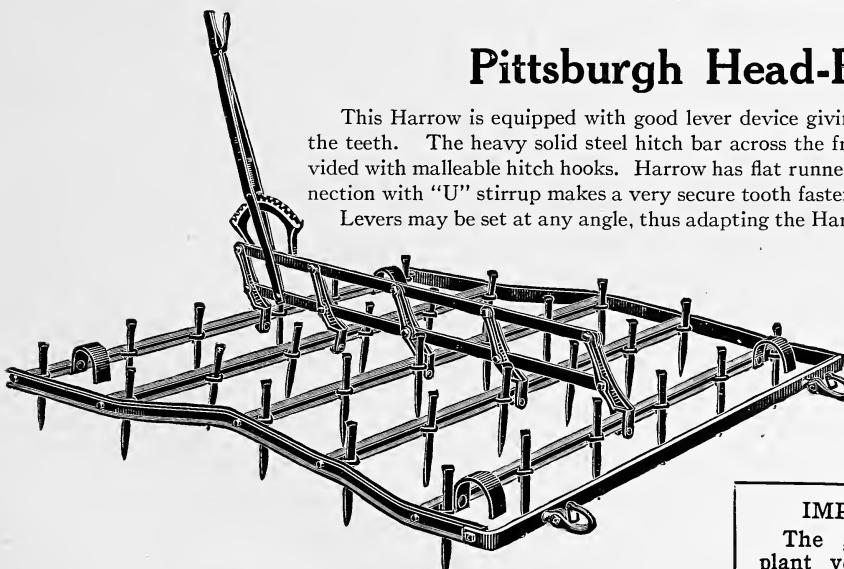


Showing 25-Tooth Section of Harrow

Pittsburgh Head-Rail Harrow

This Harrow is equipped with good lever device giving instant adjustment and desired slant to the teeth. The heavy solid steel hitch bar across the front braces the Harrow securely and is provided with malleable hitch hooks. Harrow has flat runners, and the close-fitting back boxing in connection with “U” stirrup makes a very secure tooth fastening.

Levers may be set at any angle, thus adapting the Harrow to general purpose work or for finishing and smoothing operations. It will also answer the purpose of a weeder for the first cultivation of corn and potatoes. Furnished with $\frac{1}{16}$ -inch teeth. One-horse, with 25 teeth, one section, \$11.25; two-horse, with 50 teeth, two sections, \$18.50; two-horse, with 60 teeth, two sections, \$20.50.



Showing 30-Tooth Section of Harrow

IMPROVE YOUR POOR FIELDS

The greatest soil builder and honey plant yet discovered is Hubam Sweet Clover. See page 50.

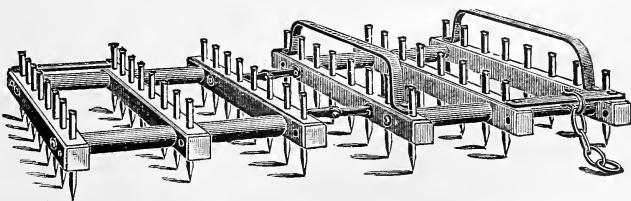
Malta Spike-Tooth Harrow

The Malta Wood-Frame Harrows are built of the very best materials throughout.

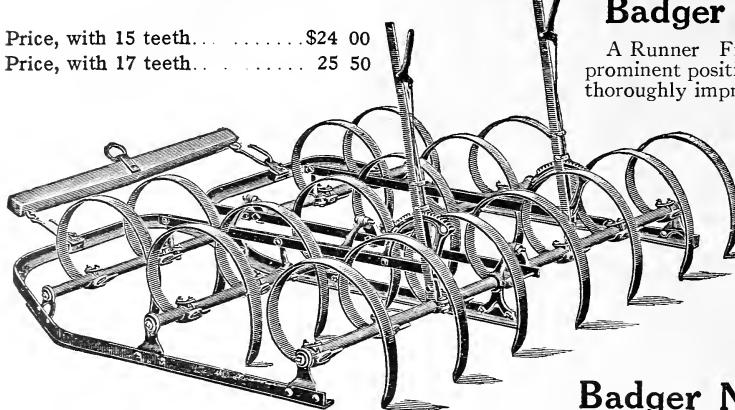
The wood work is of the best quality and of thoroughly seasoned white oak. The frames are closely jointed, and made secure and solid by steel rods passing entirely through them. All tooth bars are riveted at each end.

The hinges work free, allowing Harrow to adapt itself to uneven ground. Runners and teeth are of the best quality steel.

On account of being better made and better finished than other Harrows of this style on the market, they are having the preference. One-horse, with 32 teeth, one section, with runners, \$10; two-horse, with 48 teeth, two sections, like above cut, \$15.50.



Price, with 15 teeth..... \$24 00
 Price, with 17 teeth..... 25 50



Badger Spring-Tooth Lever Harrow

A Runner Frame Harrow—the popular style frame—holds a prominent position with the trade. It has stood the test of years. Kept thoroughly improved and up-to-date.

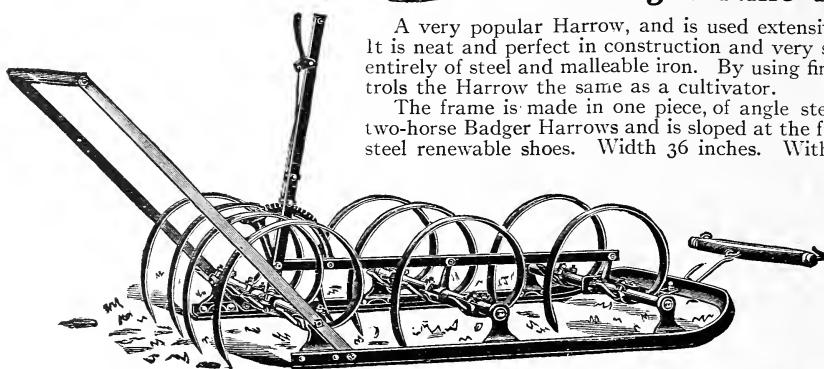
Only Three Runners of angle steel are used on the Badger, which give the Harrow great clearance and avoid clogging. This construction also causes the Harrow to always run steadily and cut uniformly. All the runners have steel renewable shoes. The nose of the Harrow is sloped so as to easily avoid obstructions.

Tooth Bars of $1\frac{1}{4}$ inch diameter steel pipe make a very strong frame, with light weight. These bars are attached to the malleable frame brackets by steel rods running the whole length of pipe on the inside. The Badger also has patented tooth-clips.

Badger Nine-Tooth Lever Harrow

A very popular Harrow, and is used extensively for gardens, small farms, and orchards. It is neat and perfect in construction and very strong, and is thoroughly guaranteed. Made entirely of steel and malleable iron. By using firmly attached steel handles, the operator controls the Harrow the same as a cultivator.

The frame is made in one piece, of angle steel, the same size and weight as used on the two-horse Badger Harrows and is sloped at the front to easily avoid obstructions. It also has steel renewable shoes. Width 36 inches. With handles, \$16.00.



Iron City Steel-Frame Lever Harrow

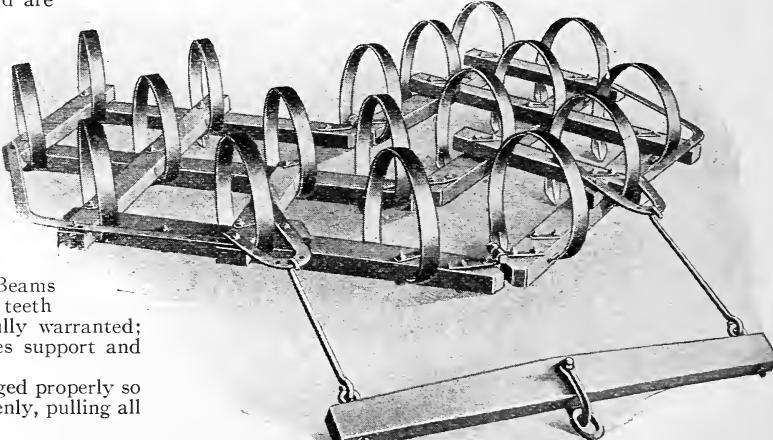
The Iron City Spring-Tooth Steel-frame Lever Harrow shown here, represents one of the most popular types of this class of harrows.

The Iron City has angle steel frame, runner style, and the front of the Harrow is constructed with a view to prevent the gathering of trash.

Renewable steel shoes are bolted to the under side of all frame angles, and can be replaced at moderate expense.

The tooth bars are steel pipe, to which the teeth are bolted and held securely with the assistance of spanner clips.

All teeth are carefully tested before shipment and are guaranteed against defects. Two-section, with 15 teeth, \$23; two section, with 17 teeth, \$24.50. Prices on three- or four-section Harrows will be quoted on request.



Pittsburgh Perry Wood-Frame Harrow

WOOD-FRAME STEEL LINED HARROW

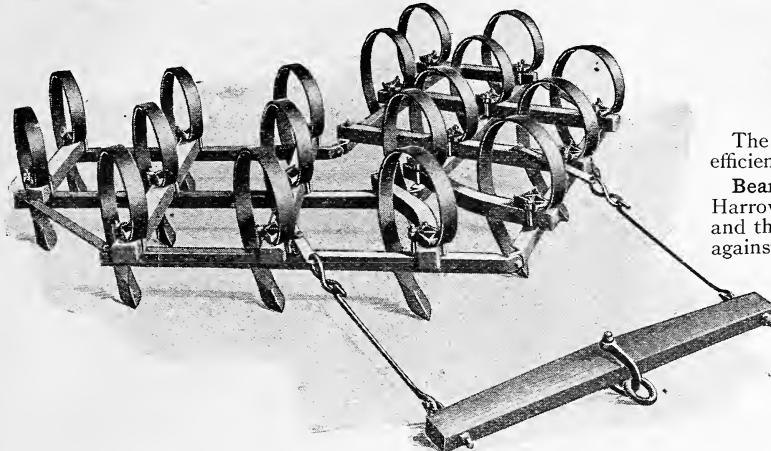
Lined Guarded, Protected Bolt Heads,
 Perfect Tooth Seat, Adjustable Hitch

THE BEST OF THE "WOOD FRAMES"

The Best Wood-Frame Harrow on the market. Beams full 3 inches, linings No. 12 gauge steel; bolts $3\frac{1}{8}$ inch; teeth are full length and weight, tempered in oil and fully warranted; our tooth fasteners are channel steel. Steel Braces support and strengthen the outer end of the Harrow.

These Harrows are well made of best oak and hinged properly so that they will not buckle in the middle, but ride evenly, pulling all teeth in the ground at about an even depth.

Price, with 16 teeth, \$19; with 18 teeth, \$20.



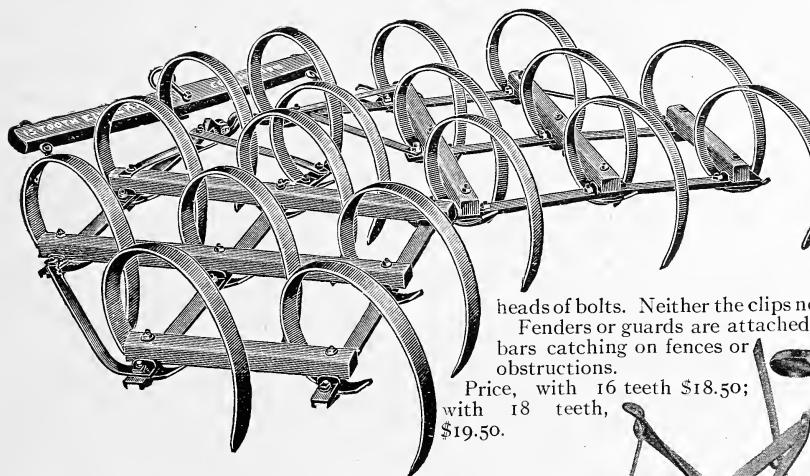
Pittsburgh Combination Harrow

The illustration tells the story—a strong, simple, and efficient Harrow.

Beams. The under side of the Pittsburgh Combination Harrow is constructed of high carbon angle steel beams, and the upper side of best oak beams, so there is no wear against the wood parts.

Teeth. Best spring steel, formed so that the pitch can be changed to suit the operator. They fasten on top of the frame and the bolt heads are protected so they will not wear off. This Harrow is taking the place of the Perry Wood-Frame Spring-Tooth Harrow.

Stump guards (or braces) placed to protect the frame and make it perfectly rigid. With 16 teeth, \$18.50; with 18 teeth, \$19.50.



Eureka Combination Harrow

The "Eureka" Combination Harrow has a construction which is far superior to the usual wood-frame Harrow, and has as long a life as an all-steel Harrow.

It is made with channel steel tooth bars and wood cross bars. All parts that are subject to any wear are steel or malleable iron.

The tooth clips are malleable. The legs of the channel bars hold the clips in perfect alignment and prevent wear of the clips and heads of bolts. Neither the clips nor teeth come in contact with the wood cross bars.

Fenders or guards are attached to each frame to brace the frames and prevent heads of bolts. Neither the clips nor teeth come in contact with the wood cross bars.

Price, with 16 teeth \$18.50; with 18 teeth, \$19.50.

No. 23 Standard
Flexible Type
6½-ft. cut

The Most Popular Size of
Two-Horse Harrow

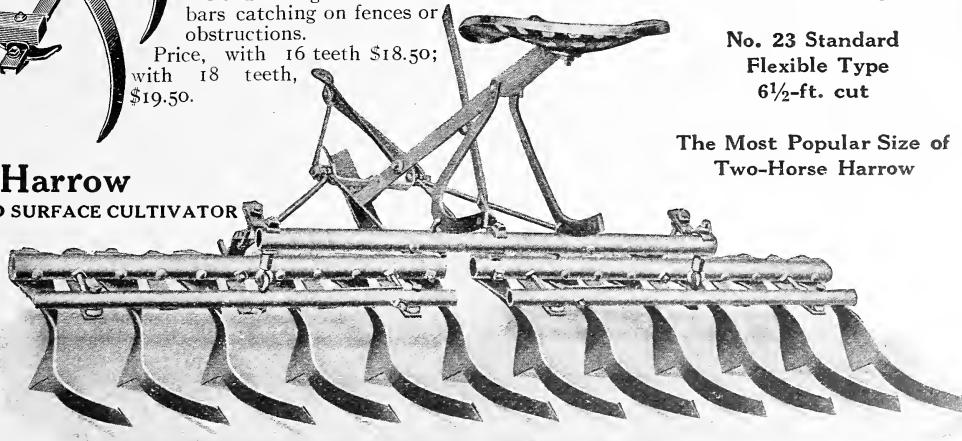
"Acme" Harrow

A PULVERIZING HARROW AND SURFACE CULTIVATOR

The colters on "Acme" Pulverizing Harrows work down between the furrow slices, filling the air-spaces with finely pulverized soil—lumps and clods are thoroughly broken up and pulverized; trash or stubble that has been carefully plowed under is not dragged to the surface as is the case with many other types of Harrows but is left beneath the surface where it rapidly rots and adds humus to the soil. The seed-bed prepared by the "Acme" Harrow is well compacted so that the seed will germinate rapidly; the surface is finely mulched so that the moisture is conserved.

Everything a Harrow ought to do, the "Acme" does. It cuts, crushes, levels, turns, smooths all in one operation, thus completely fitting the seed-bed for the seed. We have records of colters in use twelve years before being replaced with new ones. The frame of the Harrow will last indefinitely, and after the colters have been worn out new ones can be procured which will give you a Harrow just as good as when it originally left the factory.

In addition to the flexible type we are also manufacturing now Harrows of rigid frame construction like the No. 17 priced below. We have sold the "Acme" Harrow for many years and customers who have worn out their second Harrow tell us that they can find no other Harrow that can do the work of the "Acme" in preparing the ground for the seed.



Size	Weight	Width	Description	Standard Type
G	62 lbs.	3 ft.	1 horse, 1 section	\$11 25
H	105 lbs.	4 ft. 4 in.	1 horse, 1 section	14 00
*17	115 lbs.	6 ft. 6 in.	2 horse, 1 section	19 00
23	130 lbs.	6 ft. 6 in.	2 horse, 2 section	22 50
26	160 lbs.	8 ft. 6 in.	2 horse, 2 section	26 00

*Rigid Frame.

Prices upon other sizes, also for Garden Tractor sizes, quoted on request

Dunham Double Gang Disc Culti-Packer

This tool has two gangs of iron discs which crush and cut lumps, pack out all air-spaces, and level the surface of the field, all in one operation.

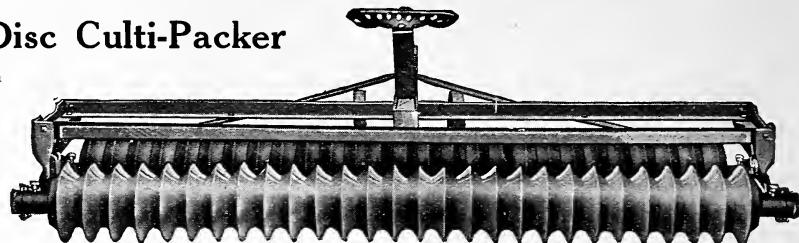
The discs of the back gang come between those of the front gang so that no lumps are missed. (See illustration.) This Culti-Packer, with a harrow for bringing up the lumps to the top will make a perfect seed-bed in any soil. Note the special features of this Culti-Packer described below, also quick detachable discs, which can be removed in two minutes' time for straddling corn rows.



Showing How Gangs Mismatch

The discs of the front gang build up a set of ridges and the back gang coming half way between splits and works these ridges over, thus stirring the soil.

The length of this machine as given above is the length of the frame. This is the standard method of listing double-gang machines. It actually disturbs 10 inches less than the listed length.



Here are some of the things that can be done with the Double Gang Disc Culti-Packer on the farm. It is used all the season.

1. Crush all lumps and pack out air-spaces.
2. Firm earth about seed after sowing.
3. Cultivate and break up crusts on growing wheat, oats, etc.
4. Straddle corn till it is one foot high.
5. Roll winter wheat in spring to close up frost cracks and crevices.
6. Stir surface for a mulch to keep moisture.
7. Run at right angles to wind to stop soil blowing.

Comfortable Seat Balances the Tongue. The seat has a wide steel spring heavily reinforced which makes the Roller easy riding. This seat is so placed that it balances the tongue, taking its weight from the horses' necks.

One-Piece Discs. All discs except the quick detachable are cast solid in one piece, without rivets or bolts which are apt to wear out, loosen, or rust.

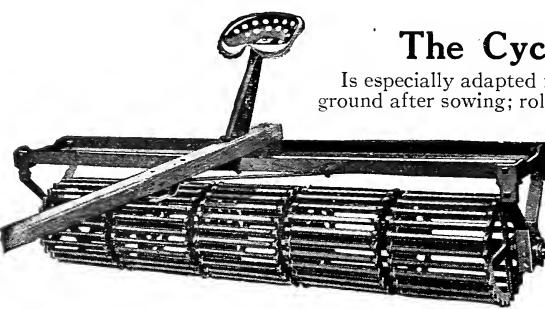
Stiff Steel Frames. The frames are stiff carbon steel and will not bend out of shape.

Quick Detachable Discs. The Culti-Packer has several detachable discs at the ends of the gang which can be detached in two minutes by simply loosening the bolts. Discs can then be spread apart for straddling corn rows. We furnish four collars to keep discs apart.

PRICES

7 ft.—18 front discs 15 in. diam., 19 rear 12 in.; weight 925 lbs.	\$72 00
8 ft.—21 front discs 15 in. diam., 22 rear 12 in.; weight 1,050 lbs.	78 00
9 ft.—24 front discs 15 in. diam., 25 rear 12 in.; weight 1,175 lbs.	84 50
For carriage instead of long pole, extra.....	7 50
Doubletrees and Neckyoke, extra	4 00

The length of this machine as given above is the length of the frame. This is the standard method of listing double-gang machines. It actually disturbs 10 inches less than the listed length.



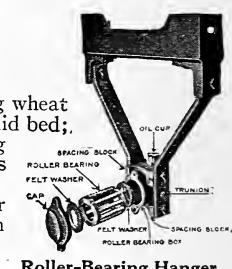
The Cyclone Pulverizer and Roller

Is especially adapted for crushing lumps and pulverizing the soil; rolling wheat ground after sowing; rolling oats after coming up; packing the soil in a solid bed; rolling corn ground after planting; rolling meadows in spring of year; breaking cornstalks in spring before plowing.

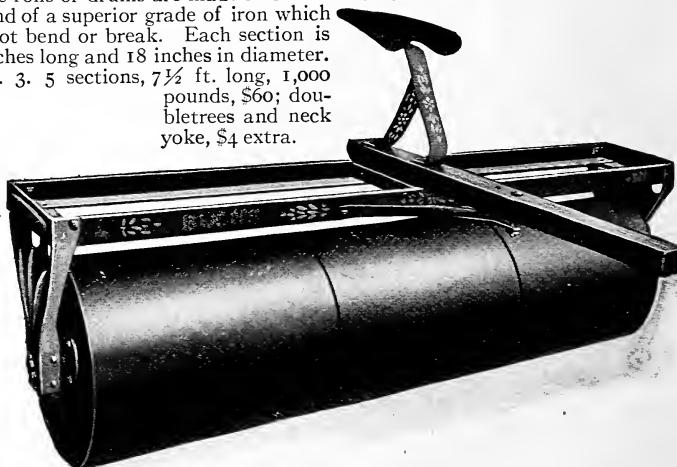
The only steel frame which will not twist or work at corners. The only steel bracket with necessary weight and strength.

The rolls or drums are made in one solid casting and of a superior grade of iron which will not bend or break. Each section is 18 inches long and 18 inches in diameter.

No. 3. 5 sections, 7½ ft. long, 1,000 pounds, \$60; doubletrees and neck yoke, \$4 extra.



Roller-Bearing Hanger



Pittsburgh Steel Land Roller

Drums or rolls are made of heavy, 12-gauge high carbon steel, with pressed steel ends, and will not dent.

Axles are 1½ inches in diameter; angles 2½ x 2½ x ½ inches.

Hangers are of 2 x 3/8 inches high carbon steel, with heavy cast tops, and regularly furnished with oil-soaked wood boxings.

The frame is constructed so that it may be used as a weight-box should additional weight be required.

Pole sets on top of frame, thus enabling us to use shorter and more rigid hangers. The hitch is underneath the tongue, reducing the draft and neck weight to a minimum. 8-foot 3 section, 24-inches in diameter. Weight 585 pounds. \$45. Doubletrees and neck yoke, \$4 extra.

For description and price of Lawn Rollers,
see page 105

Excelsior Force Feed Lime and Fertilizer Sower

The most accurate and scientific machine on the market, embodying every desirable feature required for the broadcasting of hydrated lime, carbonate of lime, dry commercial fertilizers, wood ashes, marl and nitrate of soda as well as calcium chloride.

The Excelsior Sower is a machine well built and substantial. A wide range of quantities is possible with all fertilizers. The capacity of the machine is large, the draft light—as a result the work is rapid and well done.

The agitation of the material resulting in a force feed is entirely different from any other machine on the market. The direction of

agitation is at right angles with the combined movements and vibrations of the box and material in the machine when in motion. Free and even sowing is the result.

All feed openings at the bottom of the box are at all times curved whether small or large feed is being used. This does away with clogging trouble by small hard particles that would stick in a square opening, but will readily pass through a round or oblong hole.

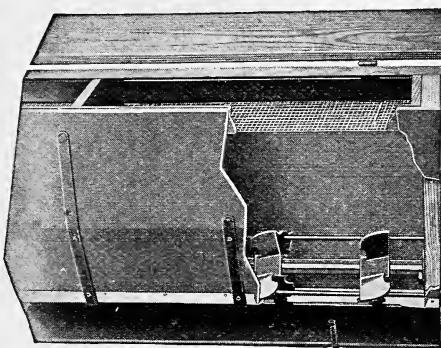
No. 1, 8-foot Machine

Actual width of sowing, 8 ft., 3 in.
Capacity of hopper, 10 bushels.
Range of quantity, 350 pounds to

3 tons.
Throws out of gear from either
wheel
Double lid on every sower.
All hoppers supplied with remov-
able screen.
Low 30-inch steel wheels with wide
4-inch tires.

No. 1. Capacity 10 bus., sows 8 feet 3 inches wide, \$50. Doubletrees
and Neckyoke, \$3.50 extra.

Adjustable scattering board.
No bolts. No gears. No cogs.
Rust-resisting iron in each sower.
Feeds instantly shut off or opened
to any desired amount.
Steel braces for hoppers.
Automatic agitator for damp
materials.
Metal sowing dial with patented
lever stop.



This illustration gives you an excellent view of the arrangement of the double lid, removable screen, large hopper, force feeds and opening or outlets for materials being sown as well as the scattering board.



Stevens Lime and Fertilizer Sower

Combining Simplicity, Strength, and Durability

It is admitted by all that the Stevens has the simplest and most reliable feed of any machine on the market.

It is low down and easy to fill. The axle extends the entire width of machine. Each machine is furnished with combined pole and shafts.

It is light draft, even in soft land, as the wheels have tires 4 inches wide, also a ratchet hub, which allows the turning of corners or completely around, while in motion, or to back, without throwing out of gear.

The Stevens Fertilizer Sower has a reel which runs the full length of the hopper and keeps the fertilizer in motion so that it is forced through the openings in the bottom plates. This kind of opening, it has been found, is the only pattern that will sow successfully all kinds of commercial fertilizers in large or small quantities.

The Row Plate, as shown in illustration, is used for distributing the fertilizer in rows and is sent out with both the 5 foot 10-inch and 8 foot 3-inch sizes without additional charge. We furnish at small cost a third plate attachment which is used to advantage when sowing small quantities. The latter can also be used to shut off the fertilizer at any time without making changes in the adjustment.

Combined Shafts with pole iron forming a pole, as shown in cut, is sent with each Sower, together with whiffletrees and neckyoke. We furnish a solid pole with neckyoke, evener and whiffletrees in place of combined pole when desired.

Dropping Board is now furnished with all Sowers, which is not shown in the above illustration.

PRICES

5-foot 10-inch size, hopper holds 6 bushels... \$62.00
8-foot 3-inch size, hopper holds 9 bushels... 69.00

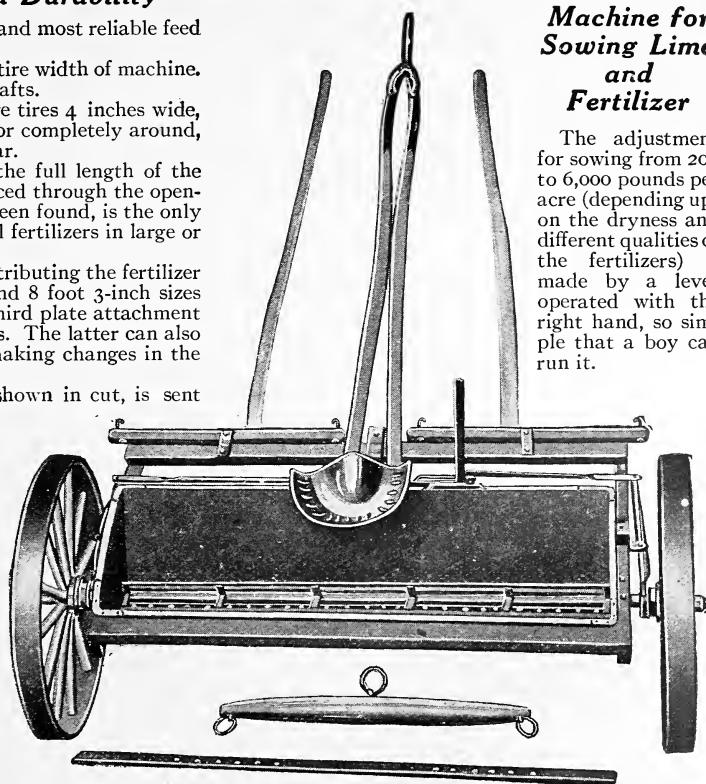
Thomasville Ground Limestone

Thomasville Ground Limestone is the best on the market, on account of its unusual softness which makes it very soluble. Also because it runs uniform, never falling below 97 per cent carbonates of lime. Write for sample.

Carload—30 tons, or upward, in bulk, per ton, f.o.b. quarry, \$3. See page 53 for further particulars.

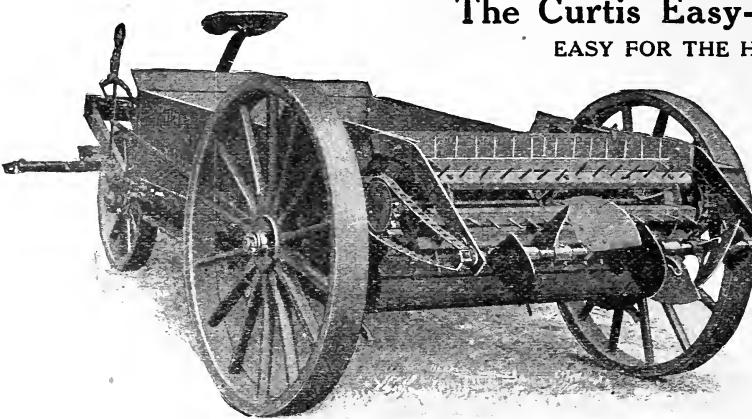
A Perfect Machine for Sowing Lime and Fertilizer

The adjustment for sowing from 200 to 6,000 pounds per acre (depending upon the dryness and different qualities of the fertilizers) is made by a lever operated with the right hand, so simple that a boy can run it.



The Curtis Easy-Pull Manure-Spreader

EASY FOR THE HORSES. EASY TO LOAD



box of the spreader tight. The manure is not scattered along the road in going to the field.

The end-gate of the "Easy-Pull" is jointed and moves away from the manure as it raises, so that it can never bind. Positive gear feed that cannot slip.

Floor Feed. The positive floor feed of the "Curtis Easy-Pull" always spreads exactly the amount of manure that the driver sets it. This gearing is simple; two pairs of strong gears incased so as to be protected from dirt, and a worm and worm wheel running in a bath of oil.

PRICES

C-H 1. 40- to 50-bus. Capacity, Two-Horse Hitch.....	\$215 00
C-H 2. 50- to 60-bus. Capacity, Two-Horse Hitch.....	220 00
C-H 3. 70- to 80-bus. Capacity, Double Pole, Three-Horse Hitch.....	227 50

Brake, \$8 extra

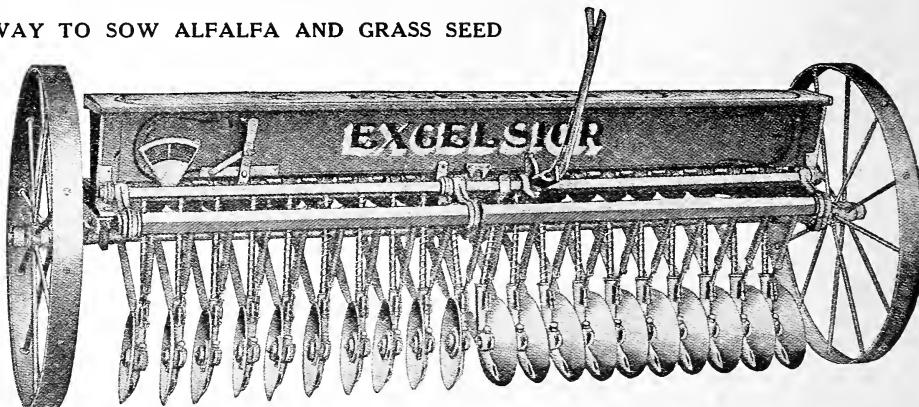
The above prices include the Wide Spread Attachment. If not wanted deduct \$9. Above Spreaders are equipped with wood wheels. Write for Special Circular.

Excelsior Alfalfa and Grass Seed Drill

THE PROPER WAY TO SOW ALFALFA AND GRASS SEED

Best machine of its type manufactured. Puts seed in the ground at an accurate, even and regulative depth where germination and growth take place in the shortest possible time.

For re-seeding meadows or alfalfa fields with bare spots, it is just the machine to use, as the discs will penetrate to a depth where the seed will take root and grow.



FEATURES OF EXCELSIOR DRILLS

Angle steel frame is thoroughly braced and riveted.

Steel wheels 36 inches high, 3-inch tire, staggered spokes.

Hopper is well built and has wooden cleats to insure even flow of seed to each opening. Ribbon steel delivery tubes. Force feed.

Pressure springs are so placed as to give a long range and automatically adjust themselves to uneven ground.

The strength and angle of the draw bars insure even spacing between discs at all times.

Helper springs make it easy to raise or lower the discs.

Adjustable tilting lever to regulate the position of furrow-openers, enabling the operator to plant deep or shallow.

Thousands of farmers have proved, by actual experience, the benefits gained by the use of the Excelsior Alfalfa and Clover Drill, not only in the increased yield from the more careful

cultivation, but a great saving of seed over the old wasteful method of broadcasting.

Throw-out clutch. All the feeds may be instantly thrown out of gear if desired. By raising the discs the feeds are automatically thrown out of gear; by lowering discs into ground the feeds are automatically thrown into gear. Discs have a range of 7 inches up and down; dust-proof bearings.

It sows 20 rows 4 inches apart. The seed can be sown to any depth desired as the discs are set at correct angle to make a perfect furrow for small seed.

The discs are 10 inches in diameter, placed 4 inches apart, which is the correct distance for small seed such as alfalfa, millet, timothy, red clover, white clover, blue grass and flax seed.

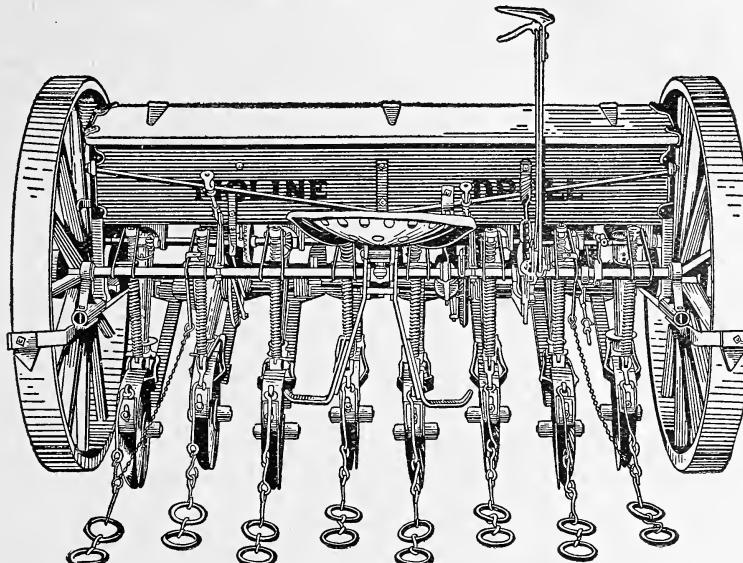
Weight, 650 pounds. Price, \$95.

Moline-Monitor Double Disc Grain Drill

"THE DRILL THAT PAYS FOR ITSELF"

Bigger
Crops
with Less
Seed

Even
Seeding
—
Light
Draft



Moline-Monitor Double Disc Drills save seed, increase the yield, and improve the grade of all grain crops. This has been demonstrated by many agricultural colleges and by thousands of farmers.

The Moline-Monitor is the original double disc. It deposits the seed at a uniform depth in the bottom of a wide, compact furrow with the downward turn of the discs. This insures even seeding and even growing.

Forms Wide, Compact Furrows

The two discs which are beveled on the outer edges, come tight together at the front lower quarter, forming a knife or wedge edge. As the machine is drawn forward, the discs first cut the soil the same as a rolling coulter on a plow and then wedge or split the furrow open, raising and compressing the earth on either side, which conserves moisture and makes a wide furrow. Less seed is required in such a furrow, as it has plenty of room in which to stool.

Uniform Seeding Depth

As the seed is dropped in front of the disc bearing with the downward turn of the discs, the discs aid gravity in carrying the seed to the bottom of the furrow. The discs on either side of the falling seed make it impossible for trash, dry top soil or anything else to get into the furrow before the seed. As the discs roll on, the moist earth which has just been displaced from the furrow falls back onto the seed before the dry surface dirt or trash falls in. Thus a uniform seeding depth is insured.

Every good seed sown with the Moline-Monitor Double Disc Drill grows; all sprout at the same time. This insures even growing and even maturing, obviating harvesting a crop, part of which is over ripe and part still in the milk.

Bigger Crops with Less Seed

From the above it will be seen that the furrow-opener is the vital part of a grain-drill and that the Monitor Double Disc will save losses from uneven seeding, crowding, uneven ripening, and lack of moisture.

Moline-Monitor Furrow-Openers Interchange

Moline-Monitor furrow-openers, double disc, single disc, shoe and hoe, are all interchangeable on Moline-Monitor Grain-Drills. Farmers frequently find that one type of furrow-openers may be better adapted to certain conditions than the ones ordinarily used. Instead of purchasing a new drill, all that is necessary is to get another set of furrow-openers.

PRICES WITH FERTILIZER AND GRASS SEED ATTACHMENTS

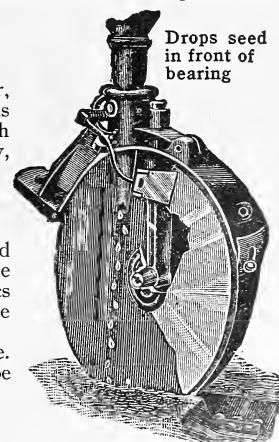
Double-Disc Drills

8 double discs, 8 inches apart.	\$139 00
9 double discs, 7 inches apart.	148 00
10 double discs, 7 inches apart.	158 00
11 double discs, 7 inches apart.	168 00
12 double discs, 7 inches apart.	178 00

Hoe Drills

8 x 8 Spring Hoe	\$128 00
9 x 7 Spring Hoe	135 00
10 x 7 Spring Hoe	143 00
11 x 7 Spring Hoe	152 00
12 x 7 Spring Hoe	160 00

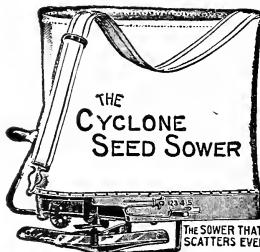
Prices on other styles and sizes quoted on request. Before you buy a grain-drill ask for special catalogue giving full details.



Thompson's Royal

14 Feet Long

This Grass Seeder has won for itself first place among all kinds of Grass Seeders. Most accurate and economical machine for sowing clover, timothy, alfalfa, and other small seeds broadcast. Runs easily, and sows evenly in windy weather. The quantity of seed sown is accurately governed by the wheel, which moves correspondingly slow or fast as the machine is run over the ground. It is



"The Cahoon" Seeder

The most accurate and durable Hand Broadcast Seed Sower. Sows all kinds of grain and grass seed. Is accepted everywhere as the world's standard. It is made of steel, iron and brass and lasts a lifetime. Every machine warranted. \$5.25; postpaid \$5.75.

The Cyclone Seed Sower

The Cyclone is a great labor- and seed-saver. Its construction is very simple and it is easily operated; even a boy can work it.

It will sow any kind of grain or seed and any desired amount per acre and one man can sow from 30 to 60 acres per day. Complete instructions are given with each machine. The manufacturers of this machine have had more than forty years' experience making Seed-Sowers, and understand how to build them to do perfect work. Every farmer who reads our catalogue has an opportunity to procure one of these valuable machines at a low price. This Sower is guaranteed to do satisfactory work and you will be pleased with it. \$2.50; postpaid \$2.75.

Columbia Planters

The Columbia Seeding Machines are the product of more than 50 years' experience in inventing, developing, and manufacturing seeding machines. They will plant any seed that grows, from the smallest flower seed to lima beans. They are absolutely accurate, having a positive force feed that does not injure the most tender seed, and you cannot possibly skip the planting of a single seed. You can hill or drill your seed, plant one seed or a dozen in a hill. When the seed has been placed in the seed-hopper, not a single seed can escape until the machine is in gear and in motion. When you stop the machine at the end of a furrow, the seed stops flowing instantly. A touch of the gear-lever throws the machine out of gear and you move to the next furrow without losing a single seed. The Columbia Planter pays for itself each season, in the saving of seed and the labor of thinning out. All Columbia Planters are built upon the same scientific and mathematical principles: the seed drops immediately into the cell or pocket formed in the seed cylinder where nothing can disturb it until it is carried to the ground by the revolution of the cylinder. The number of revolutions of the seed cylinder in any given length of furrow is absolutely controlled by the row in the disc wheel into which the sliding pinion is set. Row No. 1, next to the hub of disc wheel, is the slowest speed; each row outwardly to the 13th at the periphery increases the speed. The slower the speed of the seed cylinder, the greater the distance between the seeds planted in the furrow; the faster the seed cylinder revolves the less the distance between the seeds planted. We have still further control of the distance between the seed planting in the furrow by increasing or decreasing the number of cells in the seed cylinder.

You can plant any seed any desired distance apart with mathematical precision. You can hill or drill your seed; you can plant one seed in a hill or you can plant a dozen seeds. We send seven cylinders with each machine. These cylinders comprehend the planting of about all kinds of seeds for the average market gardener's requirements. We make cylinders for every known seed.

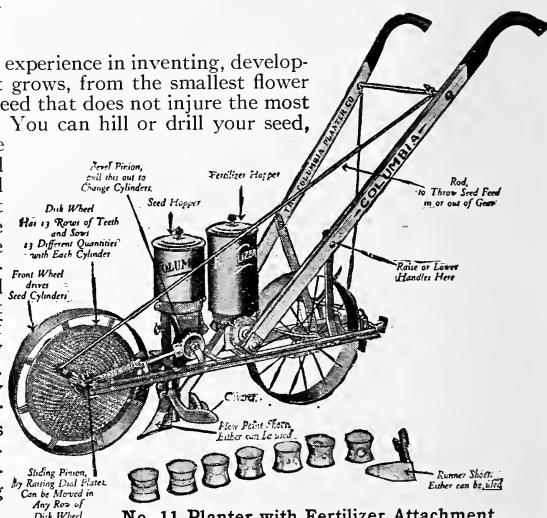
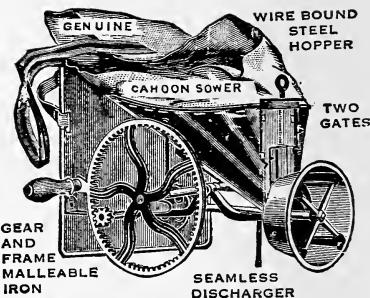
No. 11 Planter, with Fertilizer Attachment.....

Chain Feed Grass Seeder

32-inch Wheel

instantly thrown out of gear, and the amount of seed sown is quickly governed by changing the pin in the index plate as thereon indicated. Does not injure or bunch the seed, but evenly distributes it the full length of the hopper.

Sows all small seeds like Clover, Timothy and Alfalfa. Price \$10.



No. 11 Planter with Fertilizer Attachment

No. 11 Planter, without Fertilizer Attachment..... \$20 00
17 00

Moline Variable Drop Corn Planter

This Planter has a greater range of quick and satisfactory adaptability to any condition or desire for planting seed than has ever before been attempted by any manufacturer of corn-planters.

It is particularly well adapted to the needs of the corn-, pea- and bean-grower, as it will handle perfectly any shape of seed in any desired quantity.

As regularly built it is adapted to check row or drill planting and by the addition of a few easily accessible and inexpensive parts is made into a perfect automatic hill drop planter. It is adjustable for rows from 28 to 48 inches in width.

1, 2, 3, 4, 5, or 6 Kernels to the Hill

The 12-cell plate (which is regularly furnished and except in extreme cases is ample for every requirement) when used with a check-rower, plants 2, 3, 4, 5, or 6 kernels to the hill. As a drill it will plant one grain to the hill at any desired distance varying from 6 to 19 inches. With the automatic hill dropping attachment without the check wire the planter may be set to drop either 2 or 4 grains to the hill.

The movement of a convenient lever is all that is required to effect the change for any desired number of grains when the planter is used in connection with a check-rower and when the planter is used as a drill or as an automatic hill drop this same lever is used to vary the spacing of the hills.

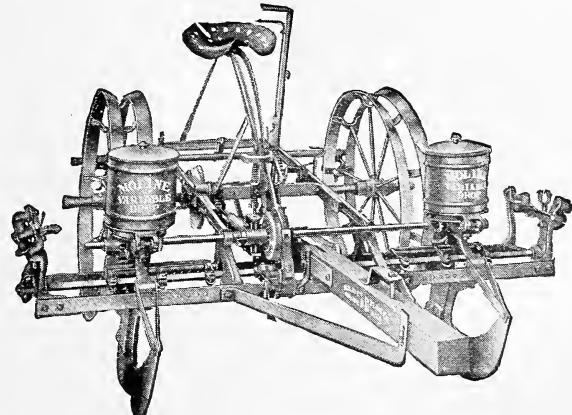
Thus it will be seen that the Moline Variable Drop Planter provides a great range of drop for any possible conditions.

Edge or Flat Drop Plates

Either edge or flat drop plates can be used with the Moline Variable Drop Planter. Both styles have advantages and can readily be interchanged as conditions require, so that plates with cells adapted for the particular kinds of seed to be planted can be used.

Automatically Raised Marker

A Moline Automatic Marker with a 12-inch steel disc adjustable for all different widths of rows is furnished with the Moline Variable Drop Planter. Ask for special circular.

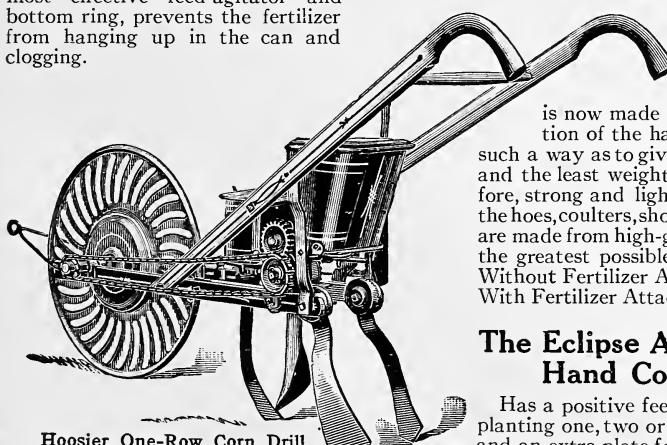


PRICES

No. 1 Planter, without Fertilizer Attachment.....	\$58 00
No. 1 Planter, with Fertilizer Attachment.....	79 00
Check-row Attachment, with Reel and 80 rods	
Wire, extra.....	12 00
Cowpea Attachment, extra.....	10 00
Doubletrees and Neckyoke, extra.....	3 00

Fertilizer Attachment

The Moline Variable Drop Fertilizer Attachment will successfully handle all kinds of commercial fertilizer in any reasonable condition. To prevent clogging the fertilizer can is narrowed at the top and wide at the bottom. This arrangement, together with the fact that it is equipped with a most effective feed-agitator and bottom ring, prevents the fertilizer from hanging up in the can and clogging.



Hoosier One-Row Corn Drill

Hoosier One-Row Corn Drill

Our One-Horse Hoe Corn-Drill is the most popular tool of the kind made, and is noted for its excellence and general good qualities. It is now made entirely of steel and iron, with the exception of the handles, and the material is distributed in such a way as to give the greatest strength and the least weight possible. It is, therefore, strong and light. All wearing parts, the hoes, coulters, shoes and covering shares, are made from high-grade steel that insures the greatest possible amount of wear.
Without Fertilizer Attachment.....\$18 00
With Fertilizer Attachment..... 22 00

The Eclipse All-Steel Rotary Hand Corn Planter

Has a positive feed and four plates for planting one, two or three grains at a time, and an extra plate for smaller seeds. Price. \$2.50; postpaid, \$2.75.

The Wiard Corn Planter

SIMPLE, DURABLE
ECONOMICAL

In this planter the seed is delivered from the dropper to the receptacle at the bottom, which, when opened by pressing over on the foot, leaves it at once at the depth required, avoiding the trouble found with all hand planters that deliver the seed direct from the dropper to the soil. Price, \$2.75; postpaid, \$3.



Eclipse Planter

Wiard Planter

The Eureka Potato Planter

Uniform Depth. Instead of being 2 feet or more ahead of the main axle, our furrow-opening plow is placed directly under the axle.

Light Draft. All users enthuse regarding the light draft of the Eureka, as compared with other makes. Our No. 11 and No. 14 are equipped with strong steel wheels, 40-inch diameter, with 3½-inch tire. These unusually large wheels decrease draft, carry the machines more steadily over rough and uneven fields, and prevent sinking into the soft earth of the fields. Both wheels drive.

Easily Operated. The driver clearly sees the operation of the seed-pickers and fertilizer distributor and does not have to guess as to the accuracy of the machine. All working parts are in plain view and all adjustments are easily and quickly made. The machine is automatic and requires only one man.

Accuracy. The dropping mechanism of the Eureka is very simple, with a positive movement, and is unusually accurate. Frequent tests

have shown it to be more than 95 per cent correct. Many users report 97 to 99 per cent. A Planter with this high average

satisfies growers and entirely offsets the old-time argument made to sell planters which require a driver and an extra man to watch the seed-dropper and supply the skips. The Eureka, with one man, will equal, if not surpass, the results obtained from any other style. The seed-hoppers and pits hold 3 bushels of cut seed. Each fertilizer hopper holds 150 pounds.

No. 11. One Row, 2-Horse Planter with Double Tube Fertilizer Attachment \$110 00
No. 14. Two Row, 2-Horse, One Man Planter with Fertilizer Attachment 180 00

Prices Without Fertilizer Attachment Quoted on Request

Eureka Potato Cutter

Its Purpose. The Eureka Potato Cutter is the only machine made which will save the potato grower a large amount of labor and eliminate so much of the unpleasantness and drudgery of cutting seed. It meets the requirements of the most exacting by cutting the seed uniformly in size and shape, saving the waste occasioned by the irregularity of hand cutting.

The Operation. By operating with the foot, both hands are free for feeding. Three knives are placed crosswise, and one lengthwise, with spring pressure guides on both sides, making a pocket into which the potato is easily placed in the position desired. Price, \$12.



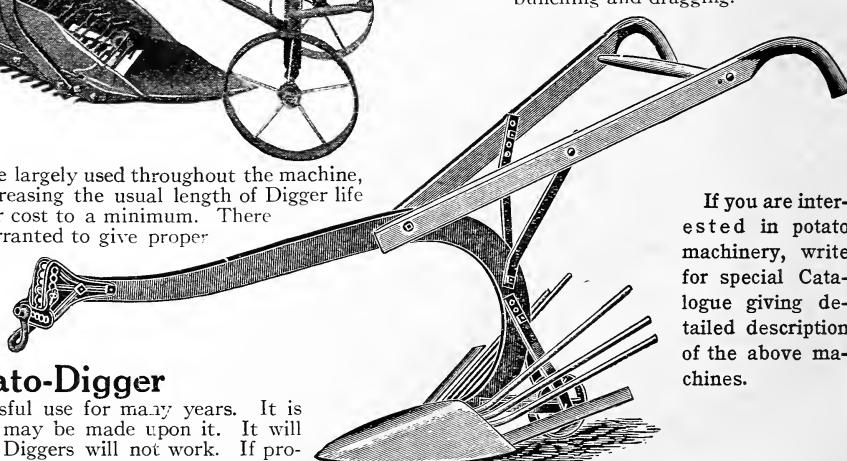
Eureka Potato-Digger

The No. 65 Eureka has large capacity and ample power for proper separation in heavy or light conditions. The frame is 22 inches wide and 6 feet long, the elevator being 5 feet long. Large ground wheels and main gears, by direct and uniform drive on each side of the machine, supply an unusual amount of traction and power. The rear shaker has an original vertical motion in addition to the oscillating movement. Stone shields

are fitted to the idlers back of the shovel. Draw beams have wide spacing and unusual clearance above shovel, preventing weeds, etc., bunching and dragging.



Long Life. Malleable iron and steel are largely used throughout the machine, making neat and strong construction, increasing the usual length of Digger life and reducing delays in the field and repair cost to a minimum. There are no complicated parts. Each part is warranted to give proper service. This guarantee is based upon the result of twenty years' Potato-Digger experience. 6-foot Size, with 4-Horse Hitch, \$115.



Pittsburgh Potato-Digger

This Potato-Digger has been in successful use for many years. It is equal to any ordinary requirements that may be made upon it. It will work where a good many higher priced Diggers will not work. If properly used, it will not cut the potatoes and will also leave the ground in good shape. The depth of the Plow can be regulated with a gauge wheel bolted on the rear and which follows in the bottom of the furrow. The beam is made heavy enough to stand all ordinary strain. The handles can be adjusted up or down. Price, \$11.

If you are interested in potato machinery, write for special Catalogue giving detailed description of the above machines.

Eureka Mulcher and Seeder

*A Smoothing Harrow,
A Cultivator, A Weeder,
A Seed-Sower*

PRICES

With Grass-Seeder Attachment

8-foot.....	\$38 00
10-foot.....	41 00

Without Grass-Seeder Attachment

8-foot.....	\$30 00
10-foot.....	32 00

Grain-Seeder Attachment, Extra, \$10

The Sulky being ahead of the teeth, insures no wheel marks, a handy spring tension lever raises the Cultivator head from the ground, also controls the depth of cut of teeth. For leveling the ground, pulverizing the soil, and preparing a good seed-bed, the Eureka Flat Tooth Cultivator has no equal. This Cultivator is far superior to the Spike-tooth Smoothing Harrow, as it cuts wider, it cuts the ground more closely, and is easier draft; the depth of cut is under the control of the operator, the head can be raised to clear the teeth of trash and the driver rides.

As a Weeder, the Eureka is very efficient. The frequent use of the Eureka during the growing season will give a large increase in the yield of corn, potatoes, and other crops.

The Seeder Box can be quickly attached or detached. Adjustments can be made to sow a variety of quantities. The teeth cover the seed thoroughly, either shallow or deep. Will sow from 2 to 20 quarts of grass seed per acre.

If used on old meadows, new seed can be applied at the same time the old grass is thoroughly cultivated, insuring a large increase in yield.

The Three-foot Size

The 3-foot, one-horse size is for cultivating and seeding between rows. Teeth cover the seed and level the field same as the larger sizes.

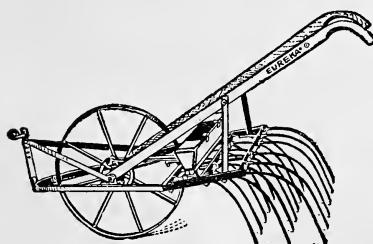
The practice of seeding cover crops between rows of corn, cotton and other crops has been quite generally adopted in many states.

It will handle crimson, red or alsike clover, alfalfa, timothy, millet, rape, turnip, rye, oats, buckwheat, etc., in various amounts desired.

Without Grass-Seeder Attachment..... \$13 00

With Grass-Seeder Attachment..... 18 00

With Grass- and Grain-Seeder Attachment..... 23 00



Eureka Weeder—Hallock Style

FLAT TEETH—ROUND POINTS—SEVEN AND ONE-HALF FEET WIDE

The Eureka Walking Weeder is equipped with 39 flat teeth, 1 inch wide, with round points. Every tooth is guaranteed.

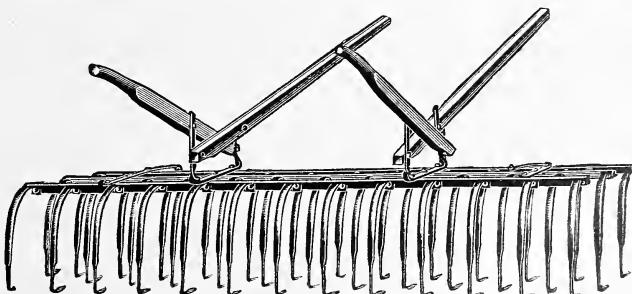
The frame or head of Weeder is angle steel, to which the teeth are bolted. Teeth can be removed from any part of the frame, as may be desired, to work only between rows. The thills and handles are adjustable to various heights of horse or man.

The Eureka Weeder can be used advantageously during the entire growing season, on corn, potatoes, oats, wheat, rye, etc., and will prove a thoroughly profitable investment, by protecting the crop and increasing the yield.

Weeds germinate near the top of soil and can be easily destroyed without injury to the crop if the Weeder is used before the weeds become deeply rooted. The use of a Weeder conserves moisture by keeping the crust of the soil broken up and forming a dust blanket to prevent the ground baking and cracking. As a surface cultivator the Eureka excels other styles of tools, because the soil is worked on the row and between the plants, as well as between rows. It can also be run any direction across the field.

A prominent farmer says: "One day's use of the Weeder at the right time will do more good than can be done by the cultivator in a week, if the early cultivation has been neglected." Price \$13.

Dust Mulch. The idea of a dust mulch has been used by many with great success for years. Farmers are now adopting it very generally, because the results have been very profitable. During the growing season and especially in dry periods, a crust forms on the top soil, hardens and cracks and allows the moisture around the roots of the plants to escape, causing a failure or decreased yield of the crop. It is, therefore, important to prevent this crust forming. It is accomplished to the best advantage by the use of the Eureka Mulcher and Weeder which forms a blanket of loose soil, prevents baking and hardening, and conserves the moisture.



Little John Riding Cultivator

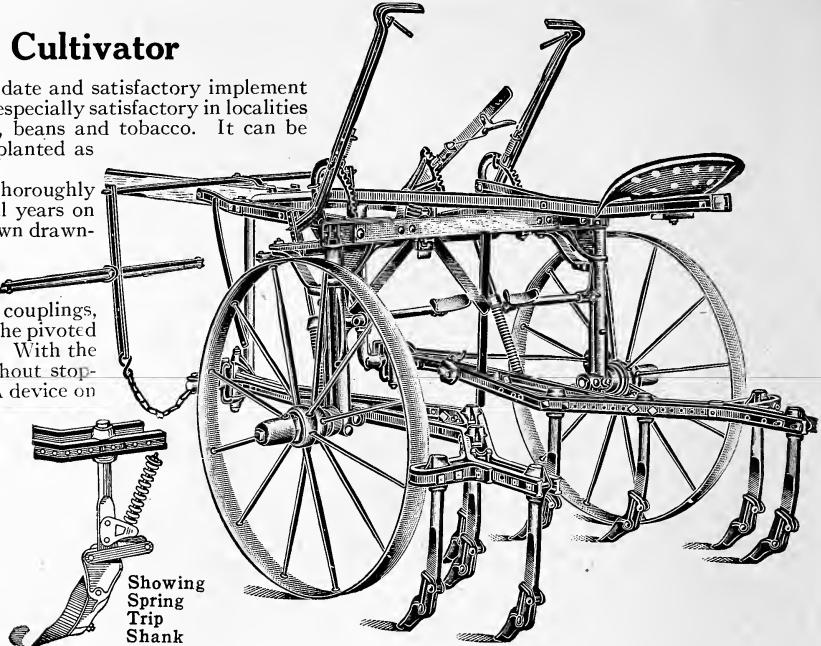
The Little John Cultivator is the most up-to-date and satisfactory implement of its class on the market today. It will be found especially satisfactory in localities where narrow row crops are planted—potatoes, beans and tobacco. It can be narrowed down to cultivate successfully crops planted as close together as 28 inches.

We have incorporated in the Little John the thoroughly tested pivot axle construction, in use for several years on our Pivot Axle Cultivators. We use the well-known draw-in hitch feature, whereby the draft of the team draws the gangs into the ground, assuring an even depth of cultivation.

The gangs are pivoted to the front on cone couplings, and are controlled by the shifter bar attached to the pivoted standards and are governed entirely by the feet. With the center lever the operator can instantly and without stopping bring the gangs together or set them out. A device on the shifter bar enables the operator to lock the frame, making it rigid. The pole is equipped with the patent pole adjustment whereby the frame of the Cultivator is kept level, regardless of the size of the team. The extension gangs are made of two bars of high carbon steel, the shovel standards are attached between the bars and the holes therein make it possible to set them as close together as may be desired.

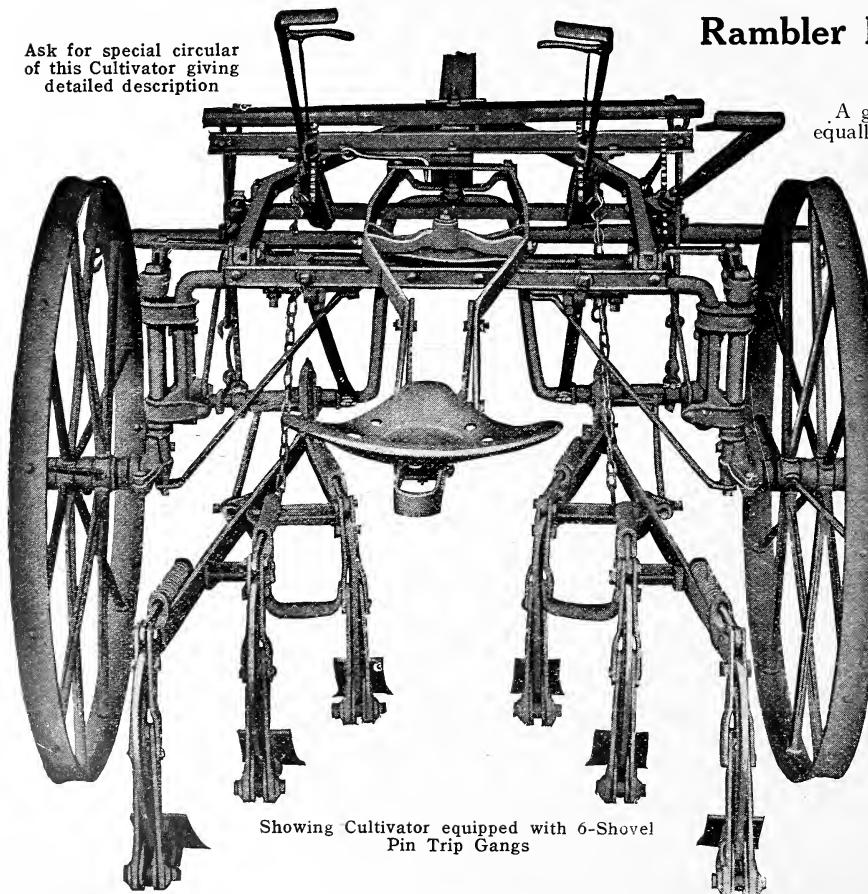
The wheels are low and very strong, equipped with dust-proof hubs.

6-Shovel, Pin Trip.....	\$42 50
8-Shovel, Pin Trip.....	43 50
6-Shovel, Spring Trip.....	46 50
8-Shovel, Spring Trip.....	48 50



Six-shovel cultivators are furnished with six $3\frac{1}{2}$ -inch double-pointed shovels, and two $1\frac{1}{2}$ -inch Bull Tongues. Eight-shovel cultivators with eight $2\frac{1}{2}$ -inch shovels, but no bull tongues. Prices include shields. Hillers, if wanted are \$1.50 extra.

Ask for special circular of this Cultivator giving detailed description



Showing Cultivator equipped with 6-Shovel Pin Trip Gangs

Rambler Ball-Bearing Riding Cultivator

A general purpose Cultivator which will do equally satisfactory work on the hillside as on level land.

The shifting mechanism is carried on ball bearings, which largely eliminates friction and makes ease of operation. It will cultivate rows planted from 3 to 4 feet apart.

Has dust-proof wheels—wide tire; cone bearings take up all wear.

Gangs are controlled and shifted laterally through direct connection with pivotal wheels and seat bar. The entire gangs are shifted parallel, thus keeping the shovels in proper relation to the row and at the same time giving the greatest dodge in cultivating crooked corn. Shifting done on ball-bearings. Practically frictionless. The construction is efficiently planned so that gangs can be raised at the end of a row by releasing the balance lever; the forward movement of the team raises the gangs automatically.

Any desired penetration is secured by the well known draw-in hitch, in connection with levers.

6-Shovel, Pin Trip.....	\$44 50
8-Shovel, Pin Trip.....	46 00
6-Shovel, Spring Trip.....	49 00
8-Shovel, Spring Trip.....	52 00

Six-shovel cultivators are furnished with six $3\frac{1}{2}$ -inch double-pointed shovels, and two $1\frac{1}{2}$ -inch Bull Tongues. Eight-shovel cultivators with eight $2\frac{1}{2}$ -inch shovels, but no bull tongues. Prices include shields. Hillers, if wanted are \$1.50 extra.

PITTSBURGH CULTIVATORS

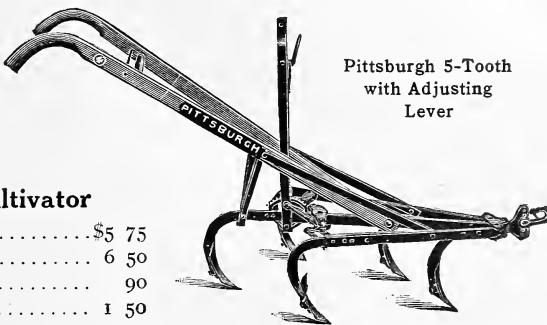
The Pittsburgh Cultivators are made of round-edge steel, and are highly finished. The outside stay braces hold the frame solid to any width it may be set.

Extra care is taken in the "setting" of the shovels to see that they "face" the work properly, have correct "pitch" and are evenly spaced so that they will cut all the ground.

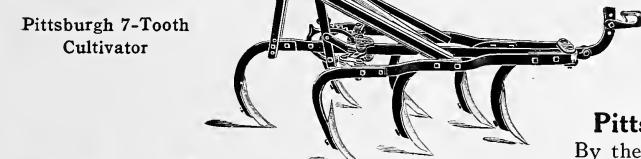
Pittsburgh 5-Tooth with Hand-Wheel Adjustment



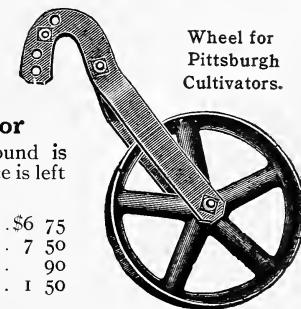
Pittsburgh 5-Tooth with Adjusting Lever



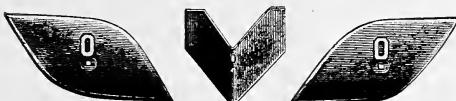
Pittsburgh 7-Tooth Cultivator



Wheel for Pittsburgh Cultivators.



Horse Hoes for 5- and 7-Tooth Cultivators



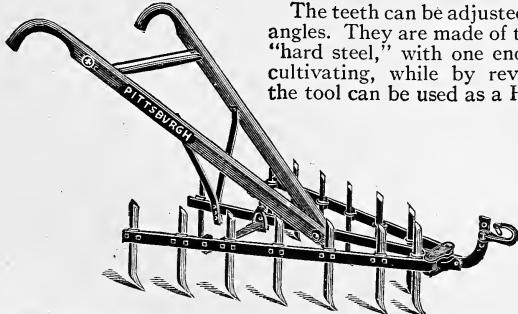
Pittsburgh 7-Tooth Cultivator

By the use of this Cultivator the ground is more thoroughly cultivated and the surface is left smooth and level.

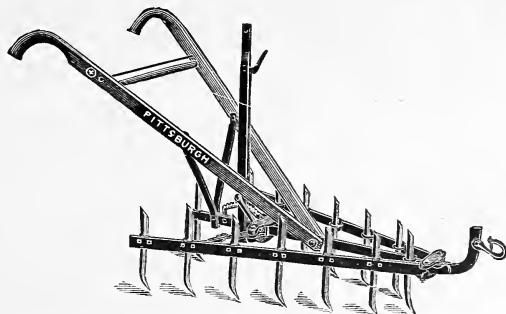
With Hand-Wheel Adjustment.....	\$5 75
With Adjusting Lever.....	6 50
Wheel Extra.....	90
Horse Hoes Extra.....	1 50

Pittsburgh 14-Tooth Cultivators

The teeth can be adjusted to different angles. They are made of the very best "hard steel," with one end shaped for cultivating, while by reversing them the tool can be used as a Harrow.



With Hand-Wheel for Adjusting Width of Frame. Price, \$6



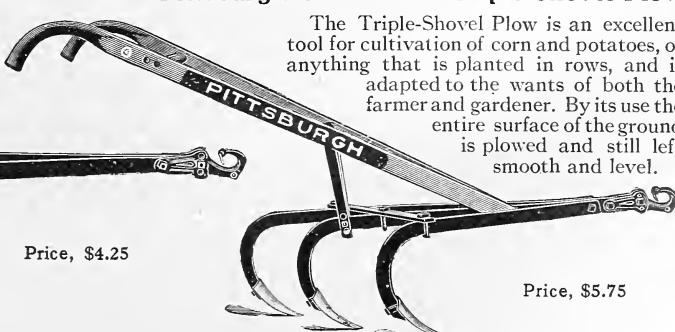
With Lever for Adjusting Width of Frame. Price, \$6.75



Pittsburgh Steel-Beam Double-Shovel Plow

Shovels have proper pitch for entering ground right, and making steady running Plow. Beams made of solid steel rolled, tapering at point.

Price, \$4.25



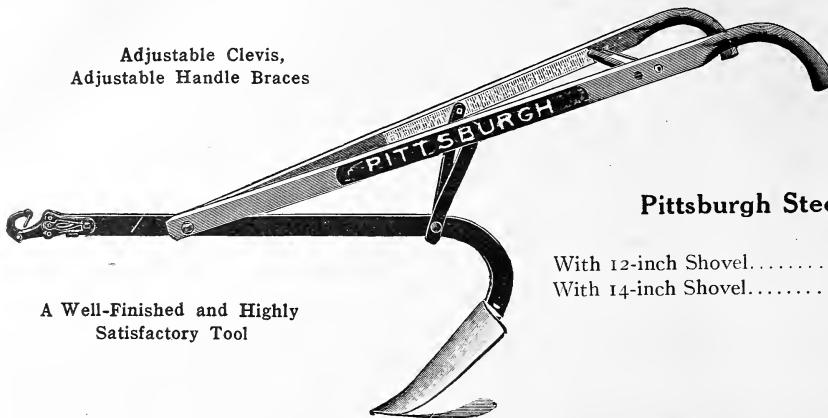
Pittsburgh Steel-Beam Triple-Shovel Plow

The Triple-Shovel Plow is an excellent tool for cultivation of corn and potatoes, or anything that is planted in rows, and is adapted to the wants of both the farmer and gardener. By its use the entire surface of the ground is plowed and still left smooth and level.

Price, \$5.75

PITTSBURGH SHOVEL PLOWS

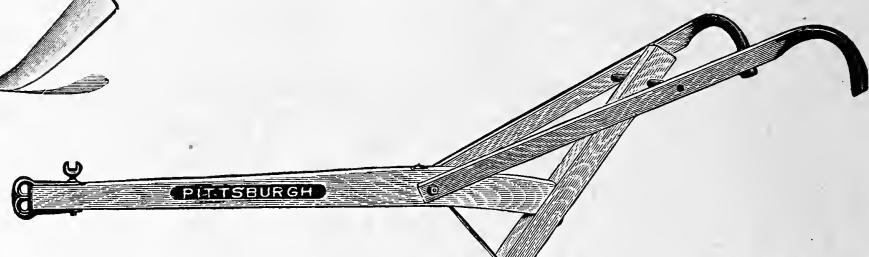
PITTSBURGH SHOVEL PLOWS



Pittsburgh Steel-Beam Single Shovel Plow

PRICES

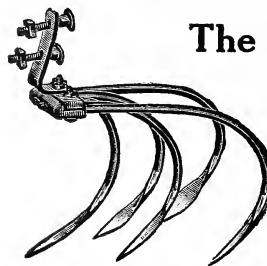
With 12-inch Shovel.....	\$4 00
With 14-inch Shovel.....	4 40



Pittsburgh Wing Shovel Plow

Price, \$4.75

For hilling potatoes and other similar work, this tool will be found highly satisfactory. The wings are adjustable by means of the punched straps or braces that support them, and they can be set to any desired angle. Width of main shovel is 12 inches, and with wings extended to limit, it makes a total width of 26 inches.



5-Prong Attachment

The Star Garden Cultivator

AN ADMIRABLE TOOL FOR THE GARDEN

This tool is a universal favorite and it is safe to say that there is no similar tool made that in the matter of ease of operation, high grade material, and fine finish will equal the Star. The Beam is made of a very stiff steel, and is constructed so that when handles are attached the center of weight falls directly over the pivoting point which forms the axle for wheel, making it self-balancing, and which admits of its being propelled with a minimum of power. Handles can be raised and lowered to suit man or boy. It is noted for its light draft and the great amount of work it will do. Built of steel throughout, except the handles, which are of selected hardwood. Price, with attachments shown in cut, \$3.50.

5-Prong Attachment

The New 5-Prong Attachment for Star Garden Plow. Can also be used on other makes of garden plows of same general type.

It's a popular attachment for the reason it brings the results the gardener wants. By means of this attachment you are able to cultivate the soil in proper manner and the weeds will have absolutely no chance to sprout. Also the proper stirring of the soil prevents evaporation of the valuable soil moisture which feeds and gives life to the growing plants. This attachment leaves the soil level and loose and will stir the same to any depth. The middle prong is often removed and rows straddled. No garden cultivator is complete without this attachment. Price, 90 cts.; postpaid \$1.



Star Garden Cultivator

Planet Jr. Farm and Garden Tools

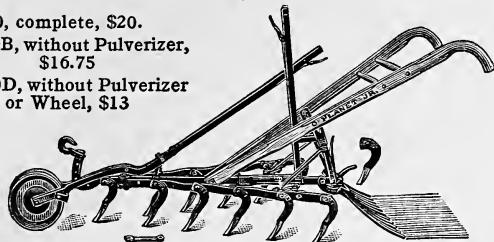
Planet Jr. Tools are the greatest savers of time, labor, and money ever invented for the farm and garden. They pay for themselves in a single season in bigger and better crops, and last a lifetime. Fully guaranteed.

Planet Jr. Twelve-Tooth Harrow Cultivator and Pulverizer

No. 90, complete, \$20.

No. 90B, without Pulverizer, \$16.75

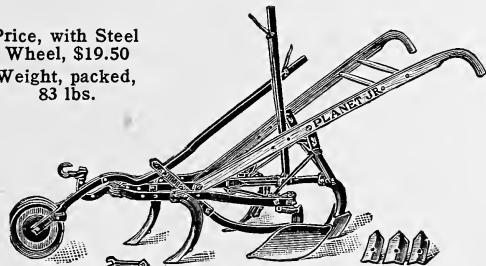
No. 90D, without Pulverizer or Wheel, \$13



With the Twelve-tooth Harrow you go as deep or shallow as you like, come up close to row without injuring plants, cut out all weeds, stir the soil and fine it as with a garden rake. You widen and narrow as you please between 12 and 32 inches. A favorite with strawberry-growers, market-gardeners, etc.

No. 8 Planet Jr. Combined Horse Hoe and Cultivator

Price, with Steel Wheel, \$19.50
Weight, packed, 83 lbs.



No other cultivating machine is so widely known as the Planet Jr. Combined Horse Hoe and Cultivator, for it is in use throughout the civilized world. It is so strongly built as to withstand incredible strain, yet it is light and easy to handle. Fifteen other styles of Planet Jr. Cultivators—various prices. Come and get a Planet Jr.; save time and money.

We have other styles of one-horse Cultivators at various prices. Fully guaranteed. Let us show you all our Planet Jrs.

No. 9 Planet Jr. Combined Horse Hoe and Cultivator

Price, with Steel Wheel, \$17
Weight, packed, 70 lbs.



This Horse Hoe is identical with No. 8, except that it has no depth regulator and a plain wheel instead of lever wheel. It has the high frame, patented hollow steel standards, steel wheel, patent lever expander, and hollow steel wheel arms.

No. 16 Planet Jr. Single-Wheel Hoe, Cultivator, Rake, and Plow



Price, \$10.25
Weight, 26 lbs.
Steel Frame
15-in. Steel Wheel

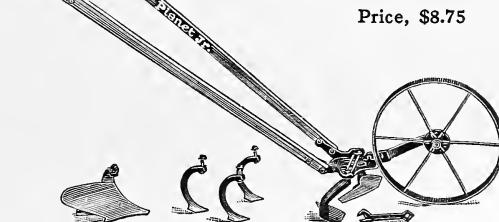
Nos. 16 and 17 wheels, frames, and handles are alike, but the attachments sold with each vary.

The handles are adjustable in height. The frame is steel, convenient and strong, with quick-change device by which to exchange the tools without removing the nuts.

These wheel-hoe tools are of a special pattern, carefully tested by practical men; no others ever offered compare with them. All the steel parts are high carbon steel, oil-tempered, finely formed, finished and polished and work to a charm.

No. 17 Planet Jr. Single-Wheel Hoe

Price, \$8.75



The highest type of Single-Wheel Hoe made. Light but strong, and can be used by man, woman, or boy. Will do all the cultivating in your garden in the easiest, quickest, and best way.

No. 17½ Planet Jr. Single-Wheel Hoe

Price, \$7.60. Weight, 21 lbs.

This tool is identical with No. 16, except in equipment. The pair of 6-inch hoes, three cultivator teeth, and leaf-lifter which go with it are all the finest of their kind.

No. 19 Planet Jr. Single-Wheel Hoe

Price, \$6.25



This combination will delight the suburbanite, the growing boy, and women, younger or older, who will find it a light-running Wheel Hoe that will save them hard work and help much to supply the table with fine vegetables.

WE HAVE THE PLANET JR. YOU NEED. COME AND GET IT

Planet Jr. Farm and Garden Tools

Cut down work and boost your crops. Old-time farming and gardening no longer pays. These scientific tools do the work of three to six men, give bigger yield, and save their cost in a single season. Invented and made by a practical farmer and manufacturer, with half a century's experience. Planet Jrs. are strong and lasting. Every tool fully guaranteed. Come and let us convince you of their economy.

No. 3 Planet Jr. Hill and Drill Seeder

Price, \$18.50

Holds three quarts of seed. A favorite among onion-growers, market gardeners, and seedsmen. Sows accurately in a narrow line making wheel-hoe cultivation easy.



No. 25 Planet Jr. Combined Hill and Drill Seeder, Double- and Single-Wheel Hoe, Cultivator, and Plow

Price, \$23

Weight, packed, 61 lbs.
Holds 2 1/2 quarts of Seed



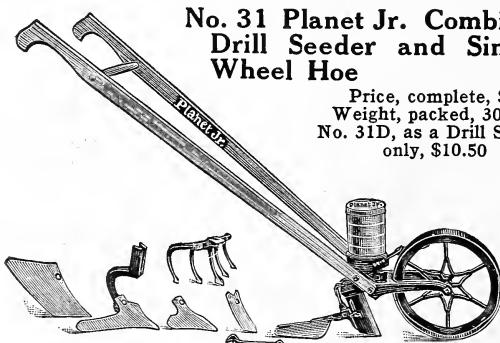
As a Seeder it is practically the same as the Planet Jr. No. 4, and as a Wheel Hoe it has the same steel frames and cultivating attachments as the Planet Jr. No. 12 Double-Wheel Hoe.

Two acres a day can easily be worked, and when it is done it will be a better job than several men could have done in the same time with hand hoes.

No. 31 Planet Jr. Combined Drill Seeder and Single-Wheel Hoe

Price, complete, \$13

Weight, packed, 30 lbs.
No. 31D, as a Drill Seeder only, \$10.50



This new tool is of great value to gardeners who have never felt able to own either a Seed Drill or a Wheel Hoe. It will sow even a small packet of garden seed with great precision. Quickly changed to a splendid Wheel Hoe. A special machine for the small gardener.

No. 33 Planet Jr. Single-Wheel Hoe

(The No. 31 without Seeder) price, \$6.50

No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, and Plow

Price, complete, \$19.50
Weight, 50 lbs.

As a Seeder only (No. 4D) \$15.50
Holds 2 1/2 quarts of seed



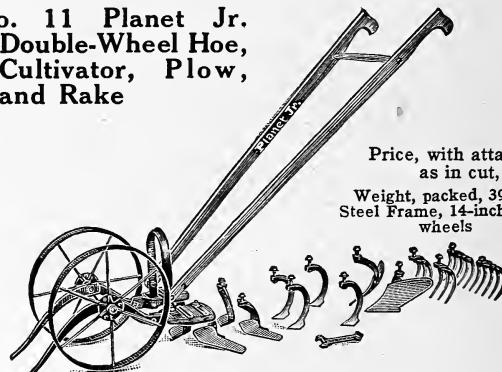
Plants in hills 4, 6, 8, 12 or 24 inches apart.

Soon pays for itself in the family garden as well as in the larger acreage. Sows all garden seeds (in drills or in hills), plows, opens furrows and covers them, hoes and cultivates quickly and easily. No. 4D, Hill and Drill Seeder, same as above less the cultivating attachments, \$18.75

No. 11 Planet Jr. Double-Wheel Hoe, Cultivator, Plow, and Rake

Price, with attachments, as in cut, \$16

Weight, packed, 39 lbs.
Steel Frame, 14-inch steel wheels

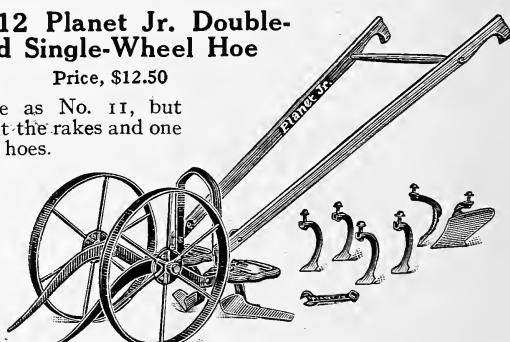


A Single- and Double-Wheel Hoe in one. Straddles crops till 20 inches high, then works between. Has steel frames and 14-inch steel wheels. The greatest hand-cultivating tool in the world.

No. 12 Planet Jr. Double- and Single-Wheel Hoe

Price, \$12.50

Same as No. 11, but without the rakes and one pair of hoes.



The attachments sold with No. 12 are what gardeners use most, and the others can be added as wanted.

You can't afford to work without a Planet Jr. Come in and let us prove it to you.

THE POPULAR
ADJUSTABLE

HAND GARDEN CULTIVATOR

Every Garden Needs One



The Norcross Line provides, for both men and women, the most modern tools at a moderate cost. Made in three sizes, of highest quality material, attractively finished and especially well constructed. The sharp tapering prongs pulverize the ground thoroughly from 1 to 5 inches deep and leave it level, loose, and untrampled. Works between rows or center shovel may be removed and rows straddled. It permits working the soil close up to plants without injury to roots or foliage.

5-prong, 4-ft. handle (weight 3 lbs.)	.....	\$1 00
3-prong, 4-ft. handle (weight 2 lbs.)	.....	75
Midget, 9-in. handle (weight 12 ozs.)	.....	40
Midget by Parcel Post, prepaid,		45cts.



The Eureka Garden and Hot-Bed Seed-Drill

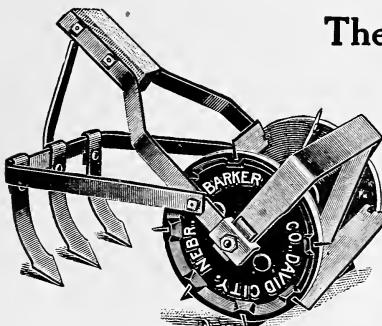
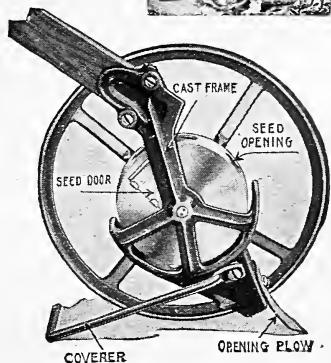
It will sow all kinds of garden seeds such as beets, cabbage, carrots, celery, lettuce, onions, radishes, turnips, etc., with the greatest regularity. It puts the seed just exactly where it ought to be, makes the row, drops and covers the seed, all in one operation. And does this just as rapidly as it can be pushed across the garden or hot-bed.

The operator can stand in an upright position and plant his garden merely by walking across it.

Every foot of your garden or hotbed can be made use of. It sows the seeds evenly and regularly, and will enable the owner to plant close up to the fence of the garden or the side of the hotbed.

The seeds are dropped by means of a force and gravity feed, and there is absolutely no chance of missing.

The drill will sow perfectly with either a large amount or a very little seed. Price \$2; postpaid, \$2.15. Handle not furnished.



The Barker Weeder, Mulcher and Cultivator

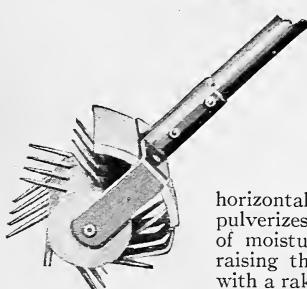
Should be in everyone's garden. Easy to operate. Self-adjusting. A time-saver. One man with a "Barker" can do more work, do better work than ten men with hoes. It cultivates and pulverizes the soil, forming a soil-mulch, which prevents evaporation, thus conserving the moisture, holding it in the soil for the use of the growing plants. The construction of this little machine is very simple. There is nothing to get out of order, nothing complicated about it. It has a revolving reel, holding eight steel blades securely fastened at the ends in cast-iron heads. Below this reel is a steel knife with ends turned up and connecting with the axle outside the heads. This lower knife passes below the surface of the ground, where it cuts off all the weed roots, while the revolving reel working in combination with it, cuts up the soil, separates the dirt from the weed roots and forms a perfect soil mulch.

No. 8 1/2D. The standard-size machine; will weed and mulch or cultivate a strip 8 1/2 inches wide..... \$11 00

No. 10D. Will weed and mulch a strip 10 inches wide..... 12 00

Ask for Special Descriptive Circular

The Porcupine Cultivator



Patent Pending

consists of a steel-covered roller 7 1/2 inches wide, studded with rows of steel spikes. These enter the soil vertically to a depth of about 2 inches. As the roller revolves, these spikes come up horizontally, bringing a section of the earth crust up against the stationary stripper-fingers, which crushes and pulverizes it thoroughly. The roots of the weed seedlings being free from earth, they quickly die from lack of moisture in the fine mulch thus formed. The spikes entering the ground in a direct line and simply raising the crust of earth, make it a surprisingly light running tool. In one-third of the time necessary with a rake the ground is put in the finely pulverized condition ideal for the quick germination and growth of the seedlings. A few minutes once a week afterward will keep the soil between the rows and hills in this condition. It keeps down grass around rose bushes, shrubbery, etc., and is fine for loosening up bare spots in the lawn, working in a top dressing of fertilizer, and a dozen other uses which readily suggest themselves. Price, \$5.

For Garden or Landscape. The rustic atmosphere desired in your garden or landscape can be secured easily by the addition of a few colonies of honey-bees. See pages 146 and 147

Moe's All-Steel Garden Tools

Made of heavy pressed steel, all one piece, and practically indestructible. No loose wood handles, and nothing to break.

The handles are formed round and smooth, no rough edges and are just the right size and shape to afford an easy grip.

They have the proper hang or balance, are stiff and strong, without unnecessary weight.

High-grade durable tools. Handsomely finished in baked black enamel, with ground and polished points.

Moe's Garden Trowel No. 80



One-piece pressed steel. Handsomely finished in black baked enamel. Length of blade, 6 inches. Ground and polished points.

Price, 35 cts. each; postpaid, 45 cts.

Moe's Transplanting Trowel No. 81

One-piece pressed steel. Handsomely finished in black and baked enamel. Length of blade 6 inches; width $1\frac{3}{4}$ inches. Ground and polished points. Price, 30 cts. each; postpaid 40 cts.



Moe's Steel Garden Weeder No. 82

One-piece pressed steel. Handsomely finished in black baked enamel. Has five steel fingers, and is one of the most useful and handiest garden tools made. Ground and polished points. Price, 35 cts.; postpaid 45 cts.

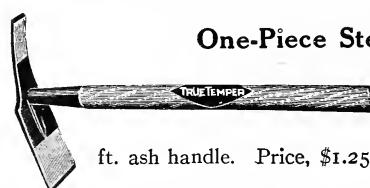
COMBINATION OFFER: Set of three tools, No. 80 Trowel, No. 81 Trowel and No. 82 Weeder, 90 cts.; postpaid \$1

English Four-Tine Digging Fork



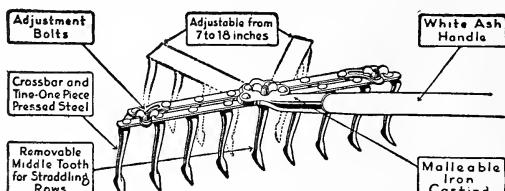
Has square tines 12 inches long, spread $7\frac{1}{2}$ inches. Tines polished front and back. Price, \$2.75.

One-Piece Steel Mattock



Just the tool for heavy soil. Has two oil tempered blades. Strong and light. $4\frac{1}{2}$ ft. ash handle. Price, \$1.25.

Pull-Easy Hand Cultivator



Use a Pull-Easy and your garden will never lose its charm. There's no garden tool so easy to handle, and none that does the work so well. It thoroughly stirs up the soil and quickly prepares it for seeding. For cultivating, it's the ideal tool—and without a rival. From seed time to maturity it's the only garden tool you need. It can be instantly adjusted to any width, from 7 to 18 inches. No trouble cultivating the narrow rows and no danger of injuring the plants. Middle tooth can be removed for cultivating two rows at once. Light, strong and well balanced. Has unbreakable teeth. \$1.25; postpaid, \$1.40.

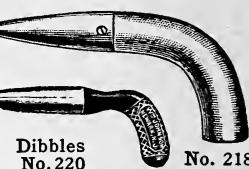


HAZELTINE WEEDER. One of the best little implements ever used in a garden. Made from special high-grade steel and will last a lifetime if given average care. Price, 30 cts.; postpaid, 35 cts.



ASPARAGUS KNIFE, No. 2500. Used also as a weeder and dandelion digger. 35 cts.; postpaid, 45 cts.

DIBBLES. 218. Wood handle, usual size..... \$0 45
219. Wood handle, small size..... 45
2180. Wood handle, brass points..... 70
220. All iron..... 45
Weight, each, 2 pounds.



No. 218

"Troweed" Trowel
A Trowel, Weeder, and Transplanter in One. The sharp point, the saw-tooth edge, the V shape, make it a combination garden tool of great value at the price of an ordinary trowel. 45 cts.; postpaid, 55 cts.



No. 211



No. 215

GARDEN TROWELS. 211. Forged steel. Weight 1 lb. 5-in. 55 cts., 6-in. 60 cts., 7-in. 65c.
217. Transplanting. Weight 1 lb. 6-in. 15 cts., 7-in. 20 cts., 8-in. 25 cts.



No. 217



No. 217-A

215. English Pattern. Weight 1 lb. 6-in. 20 cts.
217-A. Transplanting Hoe. Weight 2 lbs. 7-in. 50 cts.



No. 215

GARDEN RAKES.
S. 14. Steel, with 14 teeth..... \$0 90
S. 16. Steel, with 16 teeth..... 1 00
S. 18. Steel, with 18 teeth..... 1 00
R. 16. Steel Road Rake..... 1 40



SPADING FORKS.

4-tine, wood, D-handle, Diamond back..... 1 75
4-tine, malleable, D-handle, Diamond back..... 1 60
5-tine, wood, D-handle, Diamond back..... 2 00
5-tine, malleable, D-handle, Diamond back..... 1 85

SPADES.

2412. D-handle, solid, plain back, $7\frac{1}{2}$ x 12 inches..... 1 25
2312. D-handle, solid, plain back, $7\frac{1}{4}$ x 12 inches..... 1 25

No. 1909 Hayes High-Pressure Walking Beam Power Sprayer

This 1,100-pound Power Sprayer combines every feature of mechanical perfection with unusually compact and low-down construction. It will exactly suit the requirements of the grower with medium or small acreage. It is specially adapted for one-man operation or on hilly land. No man with 200 or more trees can afford to be without it. Increased profits from high pressure and from time, work, and solution saved, will justify its purchase for even very small orchards.

The cylinder base, waterways, and air-chamber of the pump are cast integral, giving the greatest strength with least weight and fewest parts. The large-capacity air-chamber maintains uniform pressure. All working parts are bronze and all joints are bronze to iron, so that no part of the pump is subject to corrosion by the spray chemicals. Cast phosphor bronze plungers work in perfect alignment in hard, seamless brass cylinders with bronze lubricating rings. Large bronze ball valves, separate, and instantly accessible, are proof against pressure losses and valve trouble.

The Hayes Automatic Pump Governor gives accurate and dependable pressure control, relieving the entire outfit from all load the instant the nozzles are turned off, thus effecting a big saving in fuel and unnecessary wear on the pump and engine. A constant actual working pressure of 300 pounds is guaranteed, producing a superfine spray best described as "Fruit-Fog." Two 3-blade propellers churn the solution in the tank and maintain a constantly uniform distribution of the active chemicals.

The pump is direct gear-driven by the famous 1 1/2 horse-power Fairbanks-Morse engine, which for economy, simplicity, light weight, strength and ability to do the work continuously under all weather conditions, cannot be duplicated. The construction throughout the entire outfit is steel excepting only the tank which is made of heavy first grade cypress.

SPECIFICATIONS

Engine. Fairbanks-Morse, kerosene, 1 1/2-horse-power.

Magneto. Bosch High Tension.

Pump. Hayes Walking Beam No. 90, geared.

Pump Governor. Hayes Automatic.

Agitator. Revolving with two 3-blade propellers.

Tank. 110- and 150-gallon, 1 1/4-inch cypress with manhole.

Cab. Folding, full length level platform, roll curtains.

Frame. Engine, pump and tank bolted directly to channel steel frame.

Suction Hose. Extra heavy; smooth bore, with strainer.

Discharge. Two Hayes Leakless Stop Cocks, Fig. 116.

Dimensions. Height 4 ft.; length 8 1/2 ft.; width of tank 2 1/2 ft.

Prices—F. O. B. Factory

No. 1909 Power Sprayer, complete	\$324 00
No. 1909 Power Sprayer, less only steel truck	277 00
No. 418 Power Sprayer, less engine. (See Special Catalogue)	165 50

No. 1217 Sprayer, complete as below \$60.

With 25-foot hose instead of 12 1/2-foot, add \$2.25.

No. 1217 Hayes Platform Duplex Hand Sprayer

The Hayes Duplex Sprayer is suitable for small orchards where it is not thought advisable to purchase a power outfit. With the addition of a spray boom it is a practical pump or complete field rig for spraying potatoes and row crops. In addition this pump is recommended for cold-water painting and whitewashing and is used in mills, factories, poultry farms, etc., where large surfaces are to be coated.

SPECIFICATIONS

Pump. Hayes Duplex Hand, Nos. 121, 122, and 123.

Tank. 50-gallon barrel with large filling hopper, or 100-gallon tank at additional charge.

Platform. Pump and barrel mounted on frame with platform and skids.

Suction. 1-inch galvanized pipe with strainer and union for easy removal.

Agitator. Mechanical paddle.

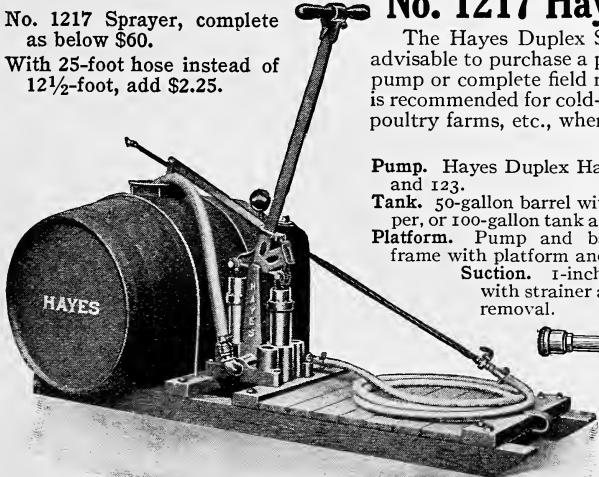
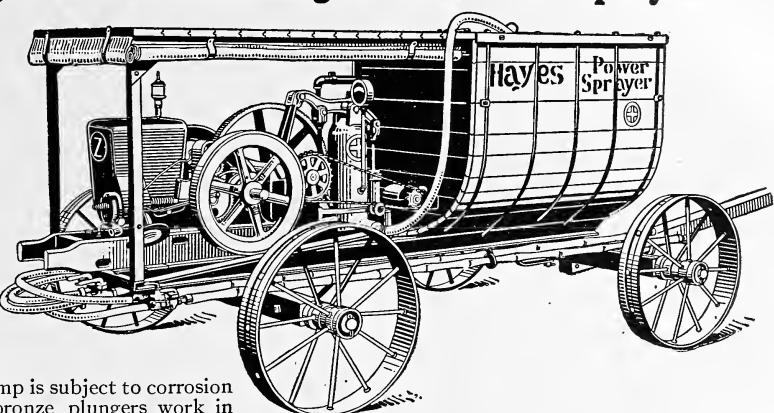
Dimensions. Length, 6 feet; height 2 feet, 6 inches; width 2 feet, 10 inches.

Accessories. 300-pound pressure-gauge, spanner, valve and special wrench.

Equipment. One 12 1/2-foot section Hayes 5-ply 1/2-inch spray hose and fittings; one 10-foot steel extension with leakless stop cock and Hayes large disc angle nozzle, Fig. 101.

Hayes Fruit-Fog Gun

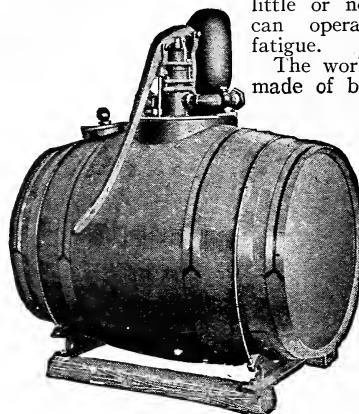
The Hayes Fruit-Fog Gun is speed equipment. With it one man handles the entire capacity of the sprayer and will do the work of three men with rods and nozzles. Many growers have entirely discarded the rods in its preference. Less than one-half turn of the handle sets it for wide, medium, or long-distance sprays, and a reverse shuts off the spray entirely. Price \$6.50; postpaid \$6.90.



Auto-Spray No. 24**ORCHARD SPRAYER**

This is our most popular Barrel Spray Pump, and is recommended to those who require a Sprayer of exceptional capacity and durability. A constant high pressure can be maintained with little or no exertion, and one man can operate this pump without fatigue.

The working parts and valves are made of brass throughout and fully exposed. The agitator and small drip-cock for cleaning out the pump cylinder are the only parts located in the barrel.



cast in one solid piece, giving perfect alignment. The air-chamber is large, and insures a steady, constant pressure.

Mounted on new barrel, with one 20-foot lead of $\frac{1}{2}$ -inch discharge hose, one 9-foot bamboo, brass-lined extension, brass Non-Clog Atomic Nozzle. \$42.50

Four-row potato attachment, complete with nozzles. 15.00

The Binks No. 21 Sprayer

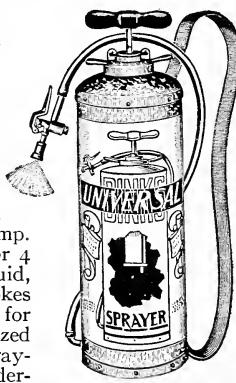
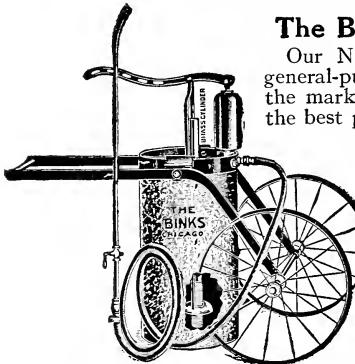
Our No. 21 machine is the latest general-purpose spraying machine on the market today. Strongly made of the best possible materials that are as light as is consistent with strength, and, owing to its portability, will suggest itself for many uses. The machine is specially adapted for use of the orchardist, dairyman, etc. The machine, being but 15 inches wide at the widest point, can pass through narrow passageways. Tank is made of galvanized steel and holds

twelve gallons of liquid. Mechanical agitator operates at each stroke of the pump and at the same time prevents sediment from clogging the strainer.

Equipment. Wire wheels, 10 feet of "Star Special" $\frac{1}{2}$ -inch discharge hose and couplings, spray pipe complete, with $\frac{1}{4}$ -inch cock, one "Star" nozzle. \$21.

The Binks No. 22 Universal Sprayer

We guarantee this Sprayer to be made of heavier metal, better material, and to operate at a higher pressure than any similar type made. It consists of a well-made galvanized steel tank, 20 inches high, 7 inches in diameter, having a capacity of four gallons, and a strong, self-contained all-brass air-pump. After the machine is filled within 3 or 4 inches from the top with spraying fluid, simply pump thirty or forty long strokes with the pump and you are ready for spraying. Furnished complete in galvanized steel with 3 feet of discharge hose, spray-nozzle and shut-off cock, with shoulder-strap for carrying. \$8.50; postpaid \$8.75.

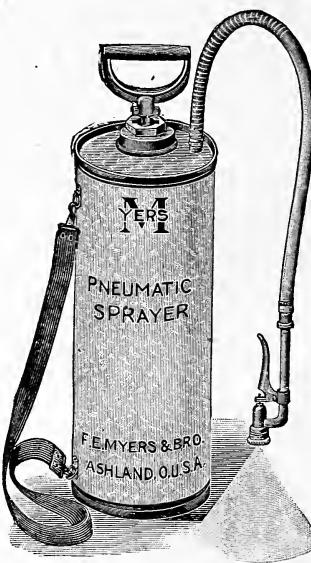
**Auto-Spray No. 1**

The Auto-Spray No. 1 is one of the best compressed-air Sprayers made. The pump is locked air-tight to the tank by a simple sliding cam. There is no screw connection to wear out or become leaky. Every part is immediately accessible and easily replaced. Each machine is fitted with 2 feet of $\frac{1}{2}$ -inch hose, fine spray nozzle, solid-stream cap and either stop-cock or our popular automatic shut-off, as ordered.

No. 1-B, brass tank,	Postpaid	
with Auto-Pop....	\$9.50	\$10.00
No. 1-D, galvanized		
tank with Auto-		
Pop.	6.50	7.00
Brass extension. 2 ft.	50	60
Brass strainer.	1.20	1.30

**The No. 296 Pneumatic Compressed Air Sprayer**

With Self-Locking D-Handle and Screw Top
With Adjustable Long Distance Spray Nozzle



It is made of heavy galvanized iron with $1\frac{3}{4}$ -inch brass tube cylinder attached to the can by means of a heavy brass screw nut. The small diameter cylinder operates easier than larger sizes. The nut is operated by lugs on the lower part of the handle, which engage in opening at the top of the nut. By means of these lugs and handle the nut can be screwed tightly to the top of the tank, and at the same time lock the plunger in position which also permits of the tank being carried by the handle when desired. We have done away with the large butterfly nuts as used on others, which are very objectionable features owing to the fact that it is not only difficult to screw the cap perfectly tight but also very injurious to the hands in pumping. The handle is D-shaped in form, and large enough to be operated by anyone with perfect comfort. The nozzle is one of the special features of this Sprayer.

By means of the small lever the spray can be adjusted from a broad fine spray, covering the ordinary distance into a complete long-distance spray throwing water 25 feet, by means of which the tops of any ordinary fruit tree can be reached. Complete, with long-distance nozzle \$6; postpaid \$6.50.

Farm Uses for Hand Sprayers

A Hand Sprayer saves its cost many times over on the farm. Today Sprayers are used wherever there is a surface to cover with solution, paint or water. Farmers use a Sprayer for applying all kinds of solutions to fruit, garden and field crops. They use it for applying solutions to all the animals on their farms, disinfecting and finally for whitewashing and cold water painting and scores of other time-saving uses. Not only is spraying cheaper, quicker and better for whitewashing buildings and fences, but it reaches crevices impossible to cover with a brush.

Acme Compressed-Air Sprayer



This is truly "the acme of perfection," in Compressed-Air Sprayers. Well adapted for the farmer, stockman, fruit-grower, poultryman, and florist. Has a strong steel or brass tank tested to 60 pounds air-pressure and a brass pump seat with bronze ball check valve, easily removed for cleaning. Seamless brass cylinder $1\frac{3}{4}$ inches in diameter, coppered plunger rod, quick-acting, efficient plunger 14 inches long. Nozzle solid brass, with spring of phosphor-bronze which will not corrode. Absolutely non-clogging, as the spiral point cleans out the cap at every operation. By this special feature the spray takes a whirling motion, thus forming a very fine spray, atomizing it thoroughly.

Spray covers evenly, leaving no blank space in the center, as is the case with other Sprayers. Sprayer is under perfect automatic control and, due to the exceptionally fine spray, saves time and material. Nozzle interchangeable, and can be taken apart and reassembled in a few seconds. Convenient shoulder strap attached to the tank with snaps.

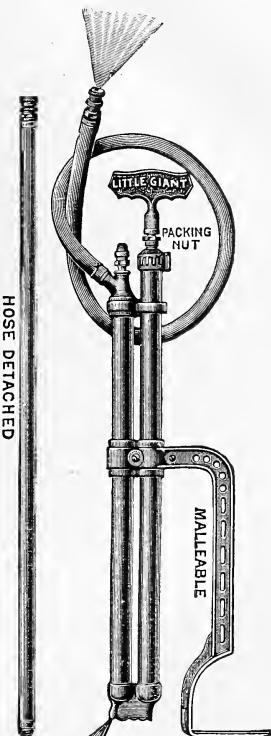
Postpaid
With galvanized steel tank..... \$6 25 \$6 75
With brass tank..... 8 50 9 00
2-foot brass extension pipe extra..... 1 25 1 40

Little Giant Sprayer

This Spray Pump is constructed entirely of brass. It is so arranged that the labor of pumping is all done on the downward stroke of the piston and nothing on the up. The effect of this operation while pumping is to hold the pump down. The foot-rest steadies the pump, holding it in proper position.

It is provided with a large air-chamber, and has brass ball valves and detachable hose. The nozzle throws a continuous spray and is not affected by the movement of the plunger. Will carry a pressure on the nozzle of from 50 to 100 pounds with very ordinary exertion. For spraying, it is arranged to discharge a fine jet in the bottom of the bucket to keep the solution thoroughly mixed and agitated, a feature peculiar to this pump only, and a very necessary feature to a Spray Pump.

Little Giant Brass Spray Pump, with agitator, complete with hose and Imperial combination fine- and coarse-spray and solid-stream nozzle, with malleable foot-rest, \$4.25; postpaid, \$4.50.



Spraying and Whitewashing Machines

Little Wonder, Style H



A Whitewashing Machine is one of the best investments for a farmer or poultryman. The various classes of work to which the machine can be applied are almost unlimited, and it will prove astonishing the amount of work which can be performed in a day by ordinary unskilled labor, while the expense of brushes, pails, ladders and other tools of the painter's kit are entirely dispensed with.

Our "Little Wonder" Machine is made of heavy galvanized iron with all joints well riveted and soldered, and a powerful self-contained all brass air-pump is furnished. They will be found invaluable for small classes of work, as around residences, barns, dairies, poultry-yards, greenhouses, gardens, etc., and will suggest themselves for a variety of uses other than that for which they are sold. They are provided with a bail handle and are very portable. Capacity of tank, 3 gallons of liquid.

We furnish 10 feet of $\frac{3}{8}$ -inch discharge hose, spray-cock and spray-nozzle with each machine. Price \$11.50; postpaid \$12.

Star, Style D

In general use by some of the largest industries of the country. Recommended for those having a considerable amount of work to do. Capacity equal to work of ten men with brushes.

Equipment. Spray-pipe complete with $\frac{1}{4}$ -inch cock and spray-nozzle, one extra spray-tip, 200-pound pressure-gauge, special galvanized sieve, follower wrench, one length of 1-inch suction hose, and 10 feet of $\frac{1}{2}$ -inch "Star Special" discharge hose. Price \$28.

Star, Style J

This is a very valuable machine, being strong and well built. The working parts are made of brass and will not corrode from the use of any liquids. One man can operate this machine alone and from 70 to 80 pounds pressure can easily be carried. Machine complete, as shown in the illustration (without bail for holding liquid—anything can be used for this purpose), with spray-pipe, spray-nozzle and cock, 10 feet of our "Star Special" $\frac{3}{8}$ -inch discharge hose, \$12.50; postpaid \$13.

Ideal Knapsack Spray Pump

The Ideal Spray Pump is constructed entirely of brass, with brass ball valves and wood hand-holds. The plunger and all parts can be instantly removed for repairs or cleaning.

It is a vast improvement over any Pump of this class. When desired, the Pump can be detached from the Knapsack and used in connection with an ordinary pail or attached to a 50-foot length of garden hose, the opposite end of which is placed in a barrel of water or cistern. Complete, with Knapsack, \$10; postpaid, \$10.50.



Style D



The Standard Sprayer



The Standard Sprayer is in reality simply a very carefully designed and accurately made squirt-gun, provided with a proper outfit of nozzles.

Its plan of operation is slightly different from other types of spraying apparatus, since the hose is used on the suction end instead of the discharge end. This makes it possible to use the pump with a bucket, barrel, tank or knapsack, depending upon the number of trees or the kind of spraying to be done.

For bucket use, a 3½-foot length of hose is supplied. To use it with barrel or tank for a large orchard, a longer hose up to 25 to 30 feet is desirable.

For spraying young or scattered trees or truck crops, such as potatoes, tobacco, etc., the knapsack and short extension are used. With these attachments the Standard will spray potatoes one row at a time at the rate of an acre an hour or better.

The Standard is made entirely of brass; no leather packings; no iron casting to rust or decay; nothing to get out of order. Postpaid With 3½-foot hose and full set of three nozzles . . . \$5 25 \$5 55 Knapsack, with attachments for above. 4 00 4 30 Extension, 19 inches long. 90 1 00 Extra hose, per foot. 30



Standard Sprayer with Potato Extension and No. 3 Nozzle, Attached to Knapsack

No. 5 Auto-Spray Pump

It's Double Acting



The Same Spray With Half The Labor

This Pump is the ideal all-purpose hand-sprayer. Its field is practically unlimited, as it may be used for spraying trees, vines, garden truck, potatoes, and any field crops, and for handling whitewash and disinfectants.

It is made entirely of brass, doing away with all danger of corrosion.

The Pump is double acting. This feature makes the spray continuous.

In an actual test this Pump generated a pressure of 180 pounds per square inch, with ordinary effort.

The Pump itself is so constructed that it can be taken apart instantly.

We furnish with this Pump 3½ feet of 3/8-inch suction hose and a heavy strainer that keeps the hose from working out of a bucket or tank.

PRICES

	Postpaid
Pump, hose, nozzle, and strainer complete.	\$5 00 \$5 30
Extension.	50 60
With galvanized reservoir (for use on potatoes or field crops)	8 00 8 40



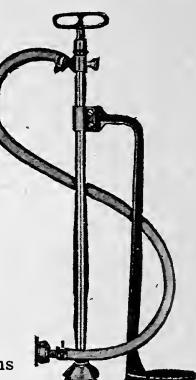
Lowell Grand Sprayer
Tin, 50 cts.; brass, \$1.
Postage, 10 cts.

Lowell Grand Sprayer

It has an air-chamber in the end of the pump-tube that prevents any moisture being drawn back on the valves. Strong, durable and satisfactory; will spray up as well as down.

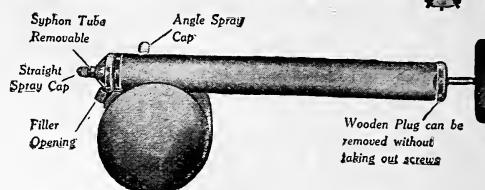
Auto-Spray No. 6, Bucket Sprayer

Sprays perfectly on both the up and down strokes, and requires only about one-half the energy required to operate an ordinary Pump. Produces a continuous spray. Equipped with a brass suction strainer as well as the strainer in the nozzle, making a double protection against clogging. Pump and valves made entirely of brass and equipped with 3 feet of extra quality hose and two nozzles, one for solid stream, the other for a fine mist spray. \$5.50; postpaid, \$5.85.



Auto-Spray No. 25

Continuous Sprayer. Will handle all solutions



Capacity one quart

The entire front is removable by unscrewing the front cap, permitting the siphon tube to be withdrawn should it become clogged. Fitted with 2 spray caps, one straight, the other at an angle for reaching the under side of broad leaves. Will spray with tank at any angle. Solution does not come in contact with pump cylinder.

Postpaid

No. 25-A. Tin reservoir.	\$1 00 \$1 10
No. 25-B. Galvanized reservoir.	1 25 1 35
No. 25-C. Brass reservoir.	1 50 1 60
No. 25-D. Galvanized 2-quart reservoir.	1 50 1 60



The Robertson Compressed-Air Sprayer

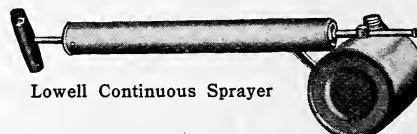
The Original Compressed-Air Sprayer

It is easy to operate and does not require half the labor that it takes to work an ordinary Sprayer. It gives a continuous spray, reduces the liquid to a fine mist-like vapor and throws it with great force, so that it is driven into the smallest cracks and crevices. By means of the Universal nozzle the spray can be thrown on the under side of the leaves of plants and shrubs, the under side of beds and other furniture, into corners, behind doors, on top of mouldings, window casings, behind steam pipes, and other difficult places inaccessible with the ordinary Sprayers. Capacity one quart.

(1) Straight nozzle; (2) Universal nozzle detached; (3) Universal nozzle as attached to holder for safe keeping when not in use. To use the Universal nozzle it is substituted for the straight nozzle No. 1 on the end of the tube.

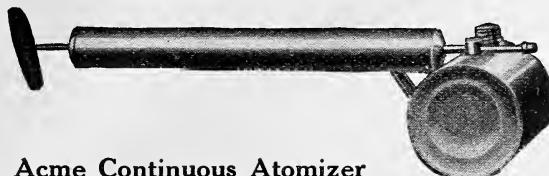
Postpaid

Tin, 1 quart.	\$1 10 \$1 25
Brass. 1 quart.	1 75 1 90



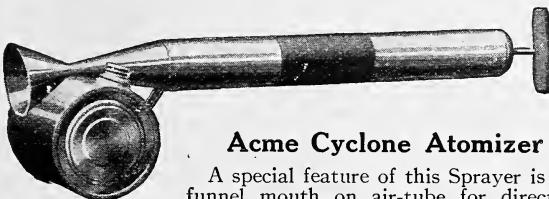
Lowell Continuous Sprayer

The Lowell Continuous Sprayer, as the name implies, is so constructed that it not only sprays on the downward stroke of plunger, but also when it is drawn back, thus causing a continuous mist-like spray. You can get into the cracks with this Sprayer. Capacity, one quart. Tin, weight, packed, 2 pounds, \$1; brass, \$1.50. Postage, 10 cts.



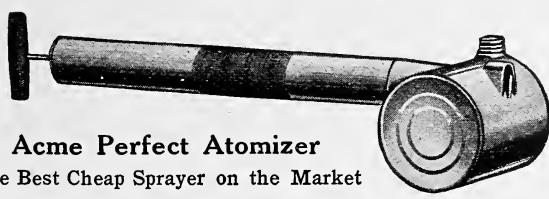
Acme Continuous Atomizer

This Sprayer is fitted with a brass ball check valve which is positive in its action and practically indestructible. No delicate adjustments to maintain. Spray is produced on both in and out stroke of the plunger, doing twice the work with the same effort. Well made of heavy charcoal tin. Capacity, one quart. 75 cts.; postpaid, 90 cts.



Acme Cyclone Atomizer

A special feature of this Sprayer is the funnel mouth on air-tube for directing the spray, a desirable feature in spraying fly-repellent on horses, cattle, etc. Made of heavy bright tin plate. Capacity, five pints. 55 cts.; postpaid, 65 cts.



Acme Perfect Atomizer

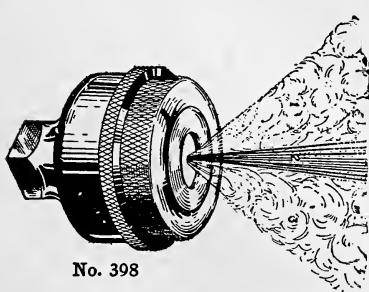
The Best Cheap Sprayer on the Market

Made of good heavy tin plate; gives a fine dense spray and fills the demand for a strong, substantially constructed Sprayer. Capacity, one quart. 50 cts.; postpaid, 60 cts.



Acme Midget Atomizer

A small, compact, substantial, and very efficient Sprayer. Throws a fine, dense, uniform spray, and is an indispensable aid to the florist and housewife. Made of charcoal tin plate. Capacity, 1 pint. 35 cts.; postpaid, 45 cts.



Non-Clog Atomic Brass Nozzles

It is fitted with standard $\frac{1}{4}$ -inch pipe thread and will fit all connections of standard make.

It cannot clog; fitted with a removable wire screen. By a simple adjustment the nozzle may be altered to give every graduation of spray.

No. 398

PRICES

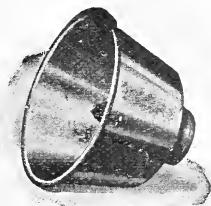
Postpaid

No. 398. Regular, straight or 45 degree.....	\$1 25	\$1 35
No. 486. Junior, straight or 45 degree.....	75	85

SPRAYER ATTACHMENTS



No. 287M



No. 366

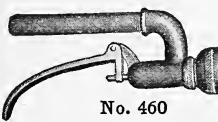
No. 366. Brass Strainer for Auto Spray.
No. 1. \$1.20; postpaid, \$1.30.



No. 287H

No. 287M. Brass Elbow. 45-degree, standard $\frac{1}{4}$ -inch threads. 30 cts.; postpaid, 35 cts.

No. 288H. Stop-Cock. Made entirely of brass. 65 cts.; postpaid, 70 cts.



No. 460

No. 460. Auto-Pop No. 1 is automatic and entirely of brass. By a pressure of the fingers on the handle, the spray is turned on; by releasing the pressure the spray automatically shuts off; unlike most shut-offs, it only takes one hand to manipulate it. \$1.50; postpaid, \$1.60. Complete with hose and fittings, \$2; postpaid, \$2.10.

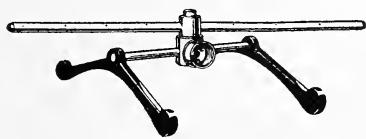


No. 318

No. 318. Extension Pipe. Brass; 2-foot lengths. For tree work two or three lengths are commonly used. The extensions screw into one another and connect direct to the shut-off. The nozzle goes on the far end of the extension. 50 cts.; postpaid, 65 cts.

RAINBOW LOW- OR HIGH-PRESSURE BRASS LAWN SPRINKLER

World's Best Rain Insurance



DOES NOT STICK OR RUST. The water descends in small particles like mist and rain combined over an area of 40 to 50 feet, watering every inch of ground. The Rainbow Sprinkler is supported on a brass sled, which may be easily drawn over the lawn, or on a brass stick stand, which is very effective on uneven surfaces. It is instantly set in motion with low water pressure. The Sprinkler may also be connected to a stand pipe and used for watering the garden. The Rainbow Lawn Sprinkler works perfectly from artesian well or tank pressure. This Sprinkler will last indefinitely with a little care. Should the small water outlets get clogged, unscrew the two end screws, turn on water and the Sprinkler clears. *It is guaranteed to give you perfect satisfaction.* Price \$2.25, postpaid \$2.35.

FOR GARDEN OR LANDSCAPE

The rustic atmosphere desired in your garden or landscape can be secured easily by the addition of a few colonies of honeybees. See pages 146 and 147.

LAWN SUPPLIES

Even-Spread Lawn Sprinkler

At last! The Sprinkler that every lawn-owner has been looking for—the product of a famous inventor—a sensational success. Sprays the water over greater radius than any other; throws an equal amount on each square foot within the immense circle, just like rain; elevates it only 3 to 4 feet above ground, preventing the wind blowing it to one side, and yet does not cut it into a fine mist to be lost in the air.



A Shower from the Clouds Can Do No More

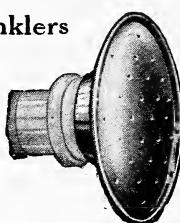
With its wonderful little spreader, spinning like a top, producing the most beautiful spray ever seen on a lawn, and yet so simply and sturdily built that it will last a lifetime—the Even-Spread is the delight of every lawn owner. \$2; postpaid, \$2.15.

"Fountain" Lawn Sprinklers



The "Baby" Fountain

It sprinkles square. 75 cts.; postpaid, 80 cts.



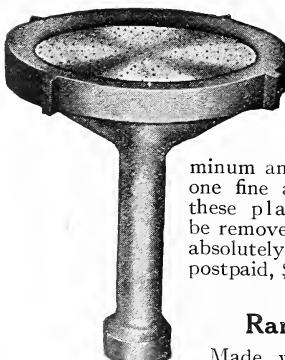
The Fountain "Shower"

Hose nozzle with a mist-like spray. 25 cts.; ppd., 30 cts.



The "Original" Fountain

Known the country over. \$1; postpaid, \$1.10.

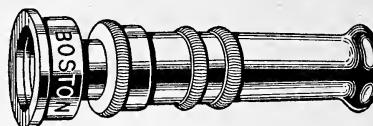


Chicago Sprayer

The Chicago Sprayer is designed to take the place of the common copper sprinkler for attaching to the end of the hose for watering purposes. The nozzle is all aluminum and equipped with two brass plates, one fine and one coarse. The fact that these plates are interchangeable and can be removed for cleaning, is a special feature absolutely found in no other nozzle. \$2.50; postpaid, \$2.65.

Rando Sprinkler

Made with a good 10-ounce tough red rubber bulb, guaranteed for one year against cracking or breaking. Neck and perforated top are of black hard rubber. \$1.50; postpaid, \$1.60.



Boston Spray Nozzle

Built to last. It gives the utmost satisfaction. None better made. Your garden hose line is incomplete without it. 75 cts.; postpaid, 80 cts.

Garden Hose



Good Luck. This $\frac{5}{8}$ -inch 6-ply Garden Hose is the biggest value on the market. Nothing approaching its quality has ever been offered at the price. This Hose is constructed similar to Bull Dog and is "built to stay alive." Here is real value for the customer who can afford only a moderate price. 25- and 50-foot lengths, couplings included, 14 cts. per ft.



Bull Dog. This $\frac{5}{8}$ -inch 7-ply Garden Hose is the most famous brand on the market. It is the recognized standard and is well known as "the kind that lasts longest." Letters come to us frequently, telling of lengths in service of fourteen to fifteen years. Money cannot buy a better Garden Hose than Bull Dog. 25- and 50-foot lengths, couplings included, 17 cts. per ft.



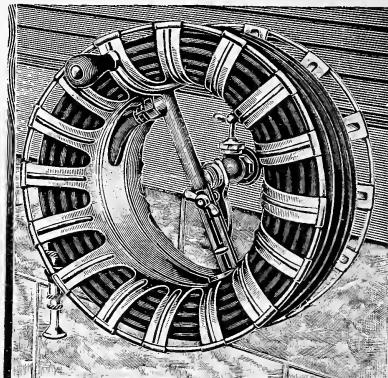
Bull Dog Spray Hose. This was thoroughly tested with numerous mixtures of blue stone, mineral oil, and arsenate solutions before being put on the market. A strictly first-class Hose for power sprayers. $\frac{1}{2}$ -inch, 7-ply, 24 cts. per ft.

Detachable Hose Reel "SAVES YOUR HOSE"

The special faucet forms a hollow axle upon which the reel revolves. The joint is made water tight by means of a fibre gasket and thumbscrew. The reel, with hose attached, can be instantly detached from the faucet and hung up out of the way when not in use.

The hose pulls off in any direction, is easily drained, and, as it is impossible to kink and twist the hose, its life is greatly increased. The water can be turned on and as much or as little of the hose unreeled as desired, while the water is running. Diameter, 20 inches; width, $8\frac{1}{2}$ inches; holds 100 feet of $\frac{3}{4}$ -inch hose.

Detachable Hose Reel, including faucet.....\$5 25
Extra faucets, each.....2 00



Write for Full Descriptive Circular



At Work on High Trees

The American Beauty Dust Sprayer

The American Beauty Dust Sprayer is a **one-man** machine. It is **small in size** and **cost**; **big in action**. It is easily operated; has a large, powerful bellows; and is capable of accomplishing an enormous amount of work—a veritable “little giant.” In less than five minutes it is filled and brought into action; always dependable, and always available at critical times, requiring only that care which any man of common-sense will give to every piece of machinery he owns.

The bellows gives a strong, intermittent blast—there **when** you want it, and **where** you want it—inactive when not wanted. No waste of material. No waste of labor.

The construction of the airway is such that a miniature whirlwind is set up, resulting in the thorough breaking up and mixing of dust particles as they are ground through the fine sifting screen. Result: A perfect cloud of very fine dust.

This very fine dust clings perfectly to every part of the tree, plant, or vine surface.

This machine is so powerful that the eddying currents carry the dust to every crack and crevice. No “missed” spots—no infected leaves left to re-infect the tree or vine.

It is so powerful that it will care for large trees, working from the ground.

To the orchardist it is worth ten times its cost, though used only to clean up edge or fence-row trees, which cannot be gotten at in any other way.

To the vineyardist, its fast work may save a crop.

Ask for Special Circular. Price \$27

The increased demand for Dusters or Dry Sprayers during the past few years is sufficient evidence that the merits of the DRY METHOD of spraying is approved by the growers as a most efficient method.

Feeny Model B Duster

The Cleanest, Easiest and Most Convenient Way to Kill the Bugs and Insects in Your Garden, on Your Flowers, Shrubs and Trees

Your garden, flowers, fruit, bushes, etc., will not suffer from insect pests if you have a Model B Duster handy. It does not have to be cleaned after use, as do sprayers—you simply use it, lay it aside and pick it up all ready for use the next time. It is so easy, clean, and convenient that it is really fascinating to use the Model B Duster.

THE MOST EFFECTIVE

The dust cloud from a Model B Duster covers every surface of the thing that is to be dusted—top, sides, underside and all—hunts every crack and crevice—nothing escapes being treated—it does the job completely.

The Model B Duster has many uses besides applying all kinds of insecticides and fungicides to gardens, flowers, trees, shrubs, etc. It is ideal for killing flies, bugs, roaches, etc., in homes, hotels and restaurants; for killing lice and other vermin in chicken-houses; for applying hog and cattle powder on the animals or in the barns, pens, or stables.

Whenever it is desired to apply any powdered material in its finest, atomized form, the Feeny Model B Duster is positively the best instrument for such application.

Price, \$1.75; postpaid. \$1.90

THE FEENY MODEL B DUSTER

THE BEST DUSTER MADE

DUSTERS



The Beetle Duster

This Duster dusts four rows of potato vines as fast as a horse walks and is adjustable for wide or narrow rows. It is used by successful potato-growers everywhere. Will distribute any dry powder such as paris green, arsenate of lead, calcium arsenate, etc. Reservoir holds about 50 pounds of paris green. Tubes and nozzles may be raised and lowered from driver's seat, and the flow of material is regulated by a gauge at the same place. By going over a plot of known acreage the amount of poison being applied per acre may readily be determined. Duster, ready to ship, weighs about 430 pounds. All parts are carefully adjusted assuring a most perfect and reliable machine, simple in construction and easy to set up. \$125.

Ask for Special Circular

The increased demand for Dusters or Dry Sprayers during the past few years is sufficient evidence that the merits of the DRY METHOD of spraying is approved by the growers as a most efficient method.

Champion Duster

(The machine that made "DUSTING" popular)

This implement has proved itself Champion, being far ahead of any other machine in its capacity to distribute a uniform and almost imperceptible quantity of paris green or other powder, doing effective work without injuring the foliage when used properly.

Will do as much work in a day as a horse-power sprayer.

Will "green" two rows of potatoes at once as fast as a man walks.

Adjustable to any width of row. Length of machine is such that the poison is kept at a safe distance from the operator.

Weighs about 6 pounds. Without tubes is 27 inches long. Each machine is packed in a case complete, comprising 4 tubes, 6 nozzles, and 2 straps. The reservoir holds over a quart of powder or about 4 pounds of paris green. \$15.

No. 131 Lowell Powder Duster

Easy to operate. Fill reservoir with dry powder, such as paris green, hellebore, powdered arsenate of lead, etc. Size of spray regulated by operation of plunger. Elbow reversible, enabling operator to spray up or down. Pump cylinder 1 3/4 inches diameter, 14 inches long. Length over all, 21 1/2 inches. Reservoir, one pint Mason fruit-jar. 75 cts.; postpaid, 90 cts.



Woodason's Powder and Liquid Spraying Apparatus

For the destruction of insects, rust, smut, mildew, blight, rot, etc., in houses, gardens, orchards or fields.

Single-cone Insect Powder Bellows. Will last a lifetime; never fails completely to destroy bed-bugs, roaches, moths, mosquitos, flies, fleas on dogs, lice on birds, animals, plants, etc. Being strong, it blows the powder well behind the woodwork and into the cracks where the insects breed in houses, hotels, camps, henries, greenhouses, hospitals, schools, jails, police stations, asylums, poorhouses, etc. Single-cone Powder Bellows, small size, \$3; large size, \$4.25. Liquid-spraying Bellows, small size, \$3.75; large size, \$4.25; postage 25 cts.

Acme Single Powder Gun

Consists of a tight, valveless bellows equipped with a distributing tube, or nozzle, a funnel, a spreader for diffusing the spray, and an elbow for placing the spray on the under side of the leaves. Handles of convenient length; bellows of fine russet leather. A practical, efficient method of applying the principles of dry spraying by hand, at a reasonable price. \$1.50; postpaid, \$1.75.

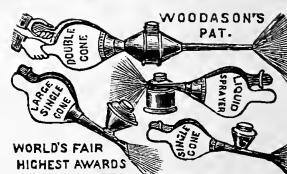
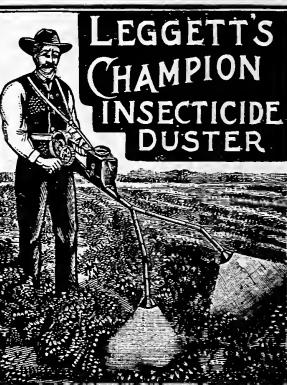
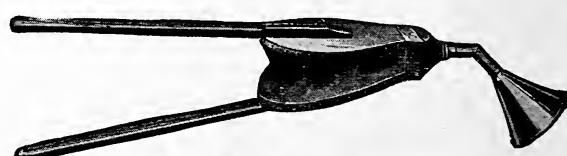


The Bug Death Duster

This Sifter is for applying any quantity or variety of dry insecticide on potatoes, melons, cucumbers, cabbages, cauliflower, etc., such as land plaster, or lime mixed with paris green or arsenate of lead, or any of the numerous manufactured varieties. It is conceded by all who have knowledge of the Sifter, to be the fastest, easiest, and only implement made that will cover large vines, using any of the dry mixtures, as fast as a man can walk. 75 cts.; postpaid, 90 cts.

Dickey Duster

For use in applying dry insecticides to small flower- or vegetable-gardens. 50 cts.; postpaid, 55 cts.



PRUNING TOOLS

Searight Extension Tree-Trimmer

Has a compound lever head and is made with a hook and side lever. It is calculated for heavy work and will cut a limb up to $1\frac{1}{4}$ inches in diameter. Instead of running the rod connecting the knife lever along one side the pole to a handle lever, we have placed the handle lever on the opposite side, which allows the rod to cross the pole. As a result one-half the strain is thrown on one side of the pole and one-half on the other, which gives about double strength, and instead of the pole warping and bending, it has a tendency to remain straight and stiff.

The strength, durability, and easy cutting qualities of these Trimmers will appeal to both the merchant who handles them, and the man who may have the pleasure to use them. Each Trimmer is fully warranted.

With 8-foot solid pole.....	\$3 75	With 12-foot solid pole.....	\$4 25
With 8-foot jointed pole, 2 sections.....	4 50	With 12-foot jointed pole, 3 sections.....	4 75
With 10-foot solid pole.....	4 00	With 16-foot jointed pole, 4 sections.....	5 00

No. 777. Searight Two Hand Pruner

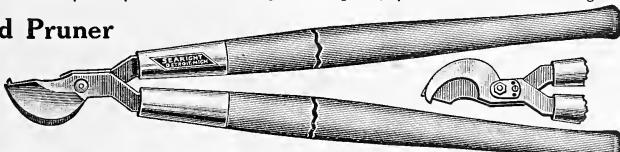
Drop forged with 26-inch handle

The 777 is designed on scientific principles and is the result of several months' study and experimental work.

The blade positively will not cut or dig into the hook nor push the branch from between it and the hook.

This is a tool of class, with more desirable features and easier cutting qualities than have ever before been combined in a single tool. Has 26-inch handle.

Price \$2.50; postpaid \$2.65



Tiffany's Improved All Steel Double-Cut Pruner

Cuts all around the limb and does not bruise the bark.

Made on honor from start to finish. This entire tool is forged from bars of fine crucible steel carefully tempered in oil and fitted with short hardwood hand-grips which cannot come off, split, or pinch the fingers.

The jaws of this Pruner open very quickly without spreading the handles too far apart, slip onto limbs easily and work into narrow places. They are so designed that large limbs are held close to the joint, which gives great leverage, and as the blade works on the draw-cut principle, we have a very smooth and easy cutting Pruner.



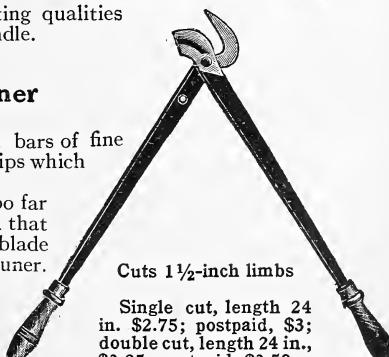
Grafting Tool

Grafting Tool

Tiffany forged steel oil-tempered Grafting Tool. Light, strong, handy, and efficient. 90 cts.; postpaid, \$1.

GRAFTING WAX. For grafting or for cuts and bruises on

trees. $\frac{1}{2}$ -lb. pkg. 20 cts., postpaid 30 cts.; lb. pkg. 35 cts., postpaid 45 cts.



Cuts $1\frac{1}{2}$ -inch limbs

Single cut, length 24 in. \$2.75; postpaid, \$3; double cut, length 24 in., \$3.25; postpaid, \$3.50.

DISSTON'S PRUNING SAWS

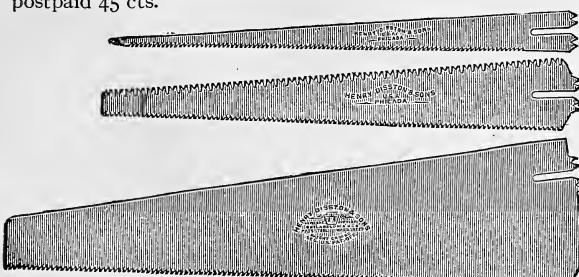
Disston's Handy Kit No. 107

This Kit consists of one 20-inch cross-cut blade, one 14-inch compass blade, one 16-inch pruning blade, and handle, all contained in a neat canvas case. \$4; postpaid, \$4.15.

Disston's No. 2 Nest of Saws

This Nest of Saws consists of one 16-inch pruning-blade with Champion Cleaner Tooth, one 14-inch compass blade, and handle. \$1.25; postpaid, \$1.35. One additional 12-inch keyhole blade will be included in this kit for 30 cents additional.

No. 107 Kit



No. 2 Nest



No. 17 Triangle Pruning Saw

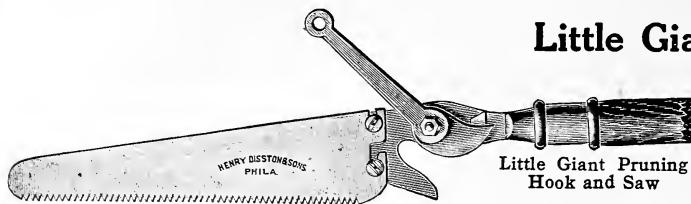
Oval steel back, straight tapered point, beech handle, varnished edges, three brass screws. Handle has extra-large grip for use with gloved hand. Blued steel blade. Length of blade 18 inches center to center of holes. \$1.75; postpaid, \$1.90.

No. 40 Duplex Pruning Saw

An extremely handy tool for pruning. The well-tempered blade combines two cutting edges—a fine tooth edge for dry pruning and a coarser edge for green pruning. The blade is secured to the beech handle by three brass screws. 16-inch \$1; postpaid, \$1.15; 20-inch, \$1.10; postpaid, \$1.25.



No. 17



Little Giant Pruning Hook and Saw

This Pruner fills a long felt need, as it combines two useful tools in one. Can be used with or without pole. The saw is detached when its use is not required on large limbs. Length of saw 12 inches. Hook will cut any branch $\frac{3}{4}$ inch diameter. Hook and Saw (without pole), \$2.75; postpaid, \$2.90.

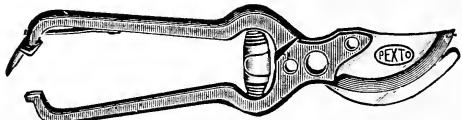
No. 18 Hand Pruning Saw

In order to make our line of Pruners complete, we have added a bracket Hand Pruning Saw, with a blade so arranged as to be turned instantly to any angle. \$2; postpaid, \$2.15.



No. 18 Hand Pruning Saw

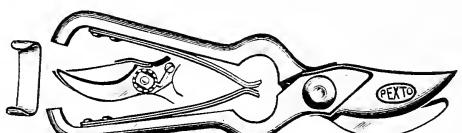
PEXTO PRUNING SHEARS



Nos. 50 and R55

California Pattern, with adjusting nut and regulating ratchet; polished tool steel blades, tempered; volute spring.

No. 50. 9-inch.....\$1 00 \$1 10
No. R55. 9-inch, full polished..... 1 50 1 60



No. R85

Swiss Pattern. Full polished, best quality crucible steel blades, tempered, ground convex; adjusting nut and regulating ratchet; longitudinal double brass spring; removable handle-clip. Each Shear individually boxed, with an extra blade, which practically doubles the life of the shear. 9-inch, \$2.75; postpaid, \$2.85.

No. 999 Secateur DROP FORGED

This hand Pruner is made of high-grade steel, the blade being stamped from crucible tool steel and the handles drop forged from open hearth steel. Special screws and bolts have been made so as to conform with the general appearance and quality of the shears and the hook, which acts as a guide to the blade when cutting, is hardened. This Secateur is a tool without comparison and we guarantee satisfaction. \$3; postpaid, \$3.10.



Little Giant Self-Setting Mole Trap

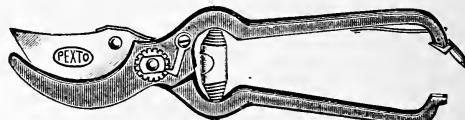
SIMPLEST—SUREST—SAFEST

It is made of all steel and heavily tinned, which makes it a very attractive as well as a durable trap. The spears are made of spring steel and are therefore smaller than those made of soft steel, piercing a mole more easily.

17 inches in height over all, $4\frac{3}{4}$ inches wide, made of $\frac{5}{8}$ inch band steel. Price, \$1; postpaid \$1.20.

FRUIT-CROP INSURANCE

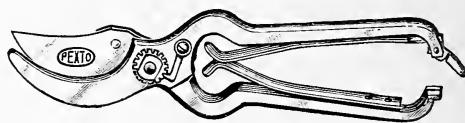
Honey-bees put the pollen where it stays put. They insure cross pollination. See pages 146 and 147.



Nos. R70 and R170

With adjusting nut and regulating ratchet; straw-colored tool steel blades of extra quality, tempered; volute spring.

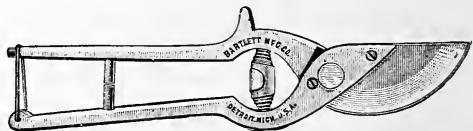
No. R 70. 9-inch.....\$1 50 \$1 60
No. R170. 9-inch, full polished and nickel-plated.. 2 25 2 35



Nos. R60 and R65

California Pattern, with adjusting nut and regulating ratchet; polished tool steel blades of extra quality, tempered; longitudinal double brass spring.

No. R60. 9-inch.....\$1 25 \$1 35
No. R65. 9-inch, full polished..... 1 75 1 85



No. 999

Mo-Lo

Mo-Lo will clear your lawn of moles and field mice in a few nights

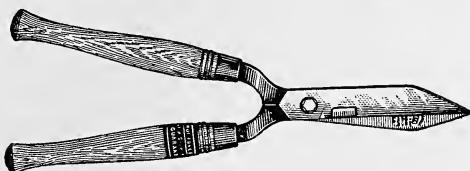
Directions.—Punch a hole in top of run, drop in one MO-LO tablet and cover lightly. Do this every 8 or 10 feet. Keep MO-LO away from children or domestic animals; it is poisonous. Package, postpaid, 25 cts.

FARM AND GARDEN BOOKS

See pages 187 and 188 for our list of the latest and best Farm, Garden, and Poultry Books.

HEDGE AND GRASS SHEARS

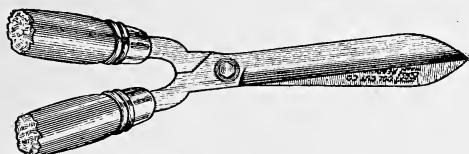
The articles shown on this page have been selected from the products of the leading manufacturers of this class of tools. They will be found exceptionally free from the defects so often found in this class of goods, caused by poor material and workmanship.



No. 101. Hedge Shears

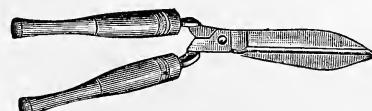
9-in. \$2; postpaid, \$2.25.

10-in. \$2.25; postpaid, \$2.40.



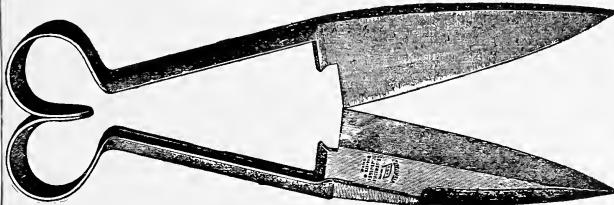
No. 106. Lawn Shears

9-in. \$2.50; postpaid, \$2.65.



No. 100L. Hedge Shears

6-in. \$1.25; postpaid, \$1.40.

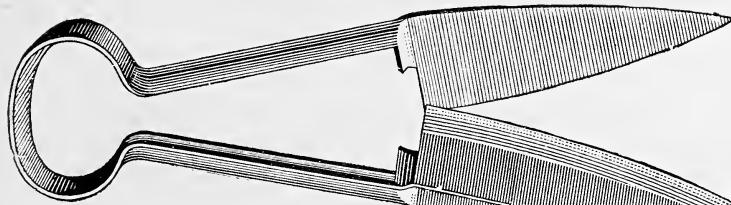


No. 1914. Sheep Shears

6-in. \$1.50; postpaid, \$1.60.



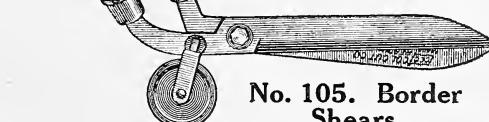
No. 11. Trowel Shank Grass Shears



No. 4. Straight Shank Grass Shears

No. 11. 5½-in. 45 cts.; postpaid, 55 cts.
 No. 4. 5½-in. 65 cts.; postpaid, 75 cts.
 No. 0267. 6-in. 90 cts.; postpaid, \$1.

Grass Shears

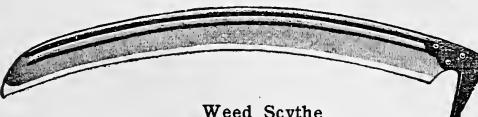
No. 1. Grass Hook
60 cts.; postpaid, 70 cts.

No. 105. Border Shears

9-in. \$5; postpaid, \$5.25.



Grass Scythe



Weed Scythe



Bush Scythe

Scythes and Snaths

PRICES

Grass Scythe, 28- to 34-inch.....	\$1 50
Grass Scythe, European style.....	2 25
Weed Scythe, 26- to 28-inch.....	1 50
Bush Scythe, 18- to 22-inch.....	1 50
Patent Grass Snath No. 00.....	1 50
Bush Snath No. 100, with ring.....	1 75
Grass Snath, European Style.....	2 00

Binder Twine

We have always made a specialty of furnishing our customers with high-grade Binder Twine. We will not handle Twine about which there is the least suspicion of shortage in length, poor material, or workmanship. We furnish the following:

Sisal. 500 feet to the pound.

Manila. 600 feet to the pound.

Standard. 500 feet to the pound.

Pure Manila. 650 feet to the pound.

Write for prices specifying quantity wanted.



bottoms of the half-bushel and peck sizes are corrugated, and all bottoms are made of No. 22 gauge steel sheets. Every farmer and gardener should have a full set of these measures. Per set (5 measures) \$2.25.

"STYLE B," LOW SHAPE

Capacity	Diam.	Depth	Each	Postpaid	Capacity	Diam.	Depth	Each	Postpaid
1 qt.	5 1/8 in.	3 in.	\$0 25	\$0 30	8 qts.	11 in.	5 5/8 in.	\$0 50	\$0 65
2 qts.	6 5/8 in.	3 7/8 in.	30	35	16 qts.	13 39-40 in.	7 1-24 in.	75	90
4 qts.	8 1/2 in.	4 3/4 in.	35	45					

Standard Dry Tin Measures

Price	Postpaid	Price	Postpaid	Price	Postpaid
1/4 pint	\$0 45	\$0 55	Pint	\$0 75	\$0 85
1/2 pint	55	65	Quart	90	1 00



Patented Jan. 23, 1917

SAVO ALL-YEAR-ROUND Flower- and Plant-Box

MADE OF HEAVY GALVANIZED STEEL

Self-Watering · Sub-Irrigating

Waters the growing plants from the bottom, making longer roots and better plants, leaving top-soil mealy and loose. No surface watering.

Plants are kept healthy and fresh the year around by absorbing the exact amount of water they require from below and allowing a perfect circulation of air to pass up through the soil, causing it to be mealy and loose. Blooms will be larger and foliage heavier than in any surface watered device.

The small holes near each corner at the top of the box are for inserting small wires or chains for hanging the box in parlors, libraries, porches, etc. These Savo Boxes are also used extensively in cemeteries, keeping plants in constant bloom. Pour water into the tube once a week. Perfect air circulation and drainage.

ALL-YEAR-ROUND FLOWER-BOX

Made of Armco galvanized ingot iron, which is noted for its rust-resisting qualities and will last for many years. Leak-proof and rust-proof. No transplanting—you can move Savo boxes indoors or out and have beautiful flowers and plants the year round.

For Windows, Porches, Sun-Parlors

SIX SIZES. ARTISTIC IN DESIGN AND BEAUTIFULLY FINISHED IN ALUMINUM OR DARK GREEN

PRICE-LIST

Model	Height	Width	Length	Each	Model	Height	Width	Length	Each
A	8 in.	9 1/2 in.	23 in.	\$3 00	E	8 in.	12 in.	12 in.	\$3 00
B	8 in.	9 1/2 in.	29 in.	4 00	F	12 in.	12 in.	12 in.	3 50
C	8 in.	9 1/2 in.	35 in.	4 50	Model B, with stand 30 1/2 inches high				12 00
D	8 in.	9 1/2 in.	41 in.	5 00	Model G, 12 in. diam., with stand 28 1/2 inches high				6 00

These are outside measurements, including the 3/4-inch roll rim. Special sizes made to order when required

Tilley's Ladders

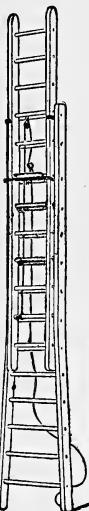
They are the most convenient orchard ladders ever produced for trimming trees and picking fruit. Made very light and strong. The best that can be produced.



Single Ladders

OPEN TOP

10-foot.....	\$3 15
12-foot.....	3 75
14 foot.....	4 40
16-foot.....	5 00
18-foot.....	6 00
20-foot.....	6 65
22-foot.....	7 70
24-foot.....	8 40
26-foot.....	10 50



POINTED TOP

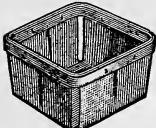
13-foot.....	4 10
15-foot.....	4 75
17-foot.....	5 65
19-foot.....	6 30
21-foot.....	7 35

Point included in above measurement.

Extension Ladders

OPEN TOP

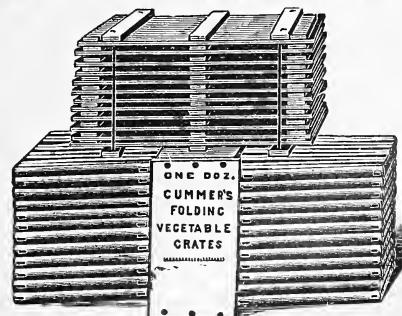
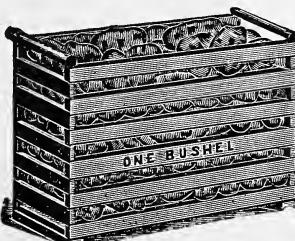
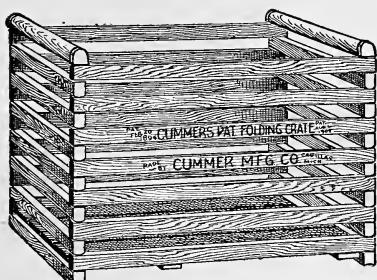
24-foot, extends to 21 feet.....	\$10 50
26-foot, extends to 23 feet.....	11 35
28-foot, extends to 25 feet.....	12 25
30-foot, extends to 27 feet.....	13 10
32-foot, extends to 29 feet.....	14 00
34-foot, extends to 31 feet.....	14 90



FRUIT PACKAGES

We make a specialty of Fruit Packages, all kinds and sizes to suit the gardening and fruit-growing trade in western Pennsylvania, among which are the following:

Berry Baskets, Diamond Market Baskets, Grape Baskets, Stave Baskets, and Hand-made Baskets. When you are in the market for Baskets, please ask us for prices.



Cummer Folding Fruit and Vegetable Crate

Made of heavy slats for constant use as a field or storage crate. They are light, strong and durable, simple and easily folded. No nails, screws, or tools required. Size of crate (outside) $11\frac{7}{8}$ inches wide, $20\frac{1}{2}$ inches long, $13\frac{1}{2}$ inches high. Size of slats $\frac{5}{8} \times \frac{15}{16}$ inch, with corners rounded. Capacity 2,350 cubic inches. 60 cts. each; postpaid, 70 cts.; \$6 per doz., \$24 for 50, \$48 per 100. We will deliver these Crates at your railroad station in lots of 50 or 100 at the above prices, direct from factory.

FRUIT-CROP INSURANCE

Honey-bees put the pollen where it stays put. They insure cross-pollination. See pages 146 and 147.

IMPROVE YOUR POOR FIELDS

The greatest soil-builder and honey-plant yet discovered is Hubam Sweet Clover. See page 50.

EXTENSION LADDERS, continued

POINTED TOP

23-foot, extends to 20 feet.....	\$10 00
25-foot, extends to 22 feet.....	10 90
27-foot, extends to 24 feet.....	11 80
29-foot, extends to 26 feet.....	12 70
31-foot, extends to 28 feet.....	13 60
33-foot, extends to 30 feet.....	14 50
35-foot, extends to 32 feet.....	15 30

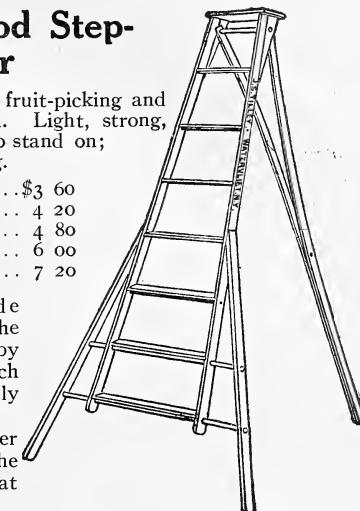
Omega Tripod Step-Ladder

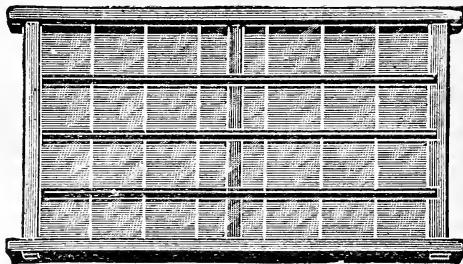
Particularly adapted for fruit-picking and for use on uneven ground. Light, strong, rigid, broad-based. Easy to stand on; easy to move; folds up snug.

6-foot.....	\$3 60
7-foot.....	4 20
8-foot.....	4 80
10-foot.....	6 00
12-foot.....	7 20

A first-class, well-made article. All flat steps. The two lower are supported by and rest on rounds which tie, support and thoroughly brace the main ladder.

Tilley Ladders are neither painted nor stained and the purchasers can see just what they are buying.





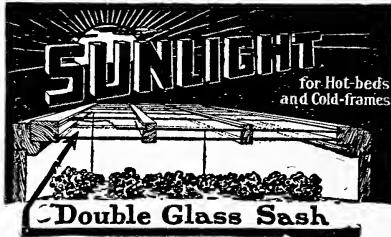
Metropolitan Single-Light Hotbed Sash

Four rows, single-layer putty Sash; either for 6 x 8 or 8 x 10 glass. Sash are 3 feet 2 inches wide by 7 feet long, $1\frac{3}{4}$ inches thick, made of best cypress, with crossbar in center, and with horns.

Prices f. o. b. Pittsburgh

	Each
Unpainted, without glass, 1 to 5 sash.....	\$4 00
Unpainted, without glass, 5 to 10 sash.....	3 90
Unpainted, without glass, 10 to 20 sash.....	3 80
For 4 x 6 foot, add 60 cts. per sash to above prices.	

Special prices on larger quantities.



Sunlight Double-Glass Hotbed Sash

Here is a Sash You Do Not Have to Cover. The Two Layers of Glass Do All the Work

They inclose an air-space $\frac{5}{8}$ inch thick, thus forming a transparent blanket. This keeps out the cold air at night better than single glass and boards or mats and it saves all the labor and expense of covering and uncovering. At the same time it lets in all the light all the time. Every gardener knows how valuable this is.

The Sash are furnished fully equipped with locking strips, etc., for glazing both the upper and under sides. The strips fit back into the grooves above the glass and cannot get out of shape. They are easily removed to admit new glass to repair breaks. No putty is needed, but it may be used as explained in directions sent with all shipments. The strips are far better than putty and will last as long as the Sash, which is a lifetime or more.

For the amateur as well as the professional gardener these Sash are a great improvement.

Prices, f. o. b. cars Pittsburgh, 3- by 6-foot size

Painted with two coats of white paint

	Each	Each
Without Glass		
With Glass		
1 to 5 sash.....	\$7 00	\$11 00
6 to 10 sash.....	6 90	10 90
11 to 20 sash.....	6 80	10 80
1 to 40 sash.....	6 70	10 70

Glass for Hotbed Sash

	Per box
6 x 8, 150 lights.....	\$6 00
8 x 10, 90 lights.....	6 00
10 x 12, 60 lights.....	6 00
8 x 10, A, Single Strength.....	6 50
10 boxes and upward, 10 cts. per box less than above prices.	



Hotbed Thermometer

No. 960L. With brass point. \$2.25; postpaid, \$2.35.

Mastica

Mastica is elastic and tenacious. In a few hours after use, a skin or film is formed, preventing the evaporation of the oils and leaving it pliable for years. On account of this quality, it admits of the expansion and contraction which is continual in the wood-work of a greenhouse from moisture and heat. One gallon will cover about 290 running feet, one side.

Postpaid

Qt. can (weight 5 pounds)..... \$0 80 \$0 90
Gal. can (weight 15 pounds)..... 2 50

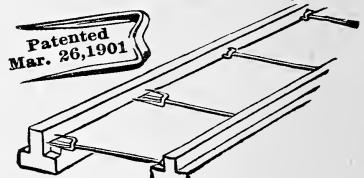
MASTICA GLAZING MACHINE. For applying Mastica.

\$2.75; postpaid, \$3.

Peerless Glazing Points

Used by all practical florists and market-gardeners for glazing hotbed sash. No. 1. For small single-thick glass. No. 2. For large, single - thick glass. Both sizes, 75 cts. per 1,000; postpaid, 85 cts.

"PEERLESS" GLAZING POINT. (Improved Van Reyper.)

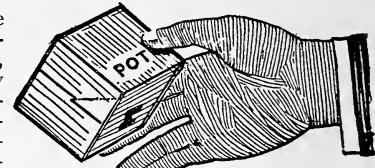


Dirt Bands and Paper Pots

You cannot get all of the money out of early vegetables without the use of Dirt Bands or Paper Pots. Melons, sweet corn, lima beans, and cucumbers may be started in Paper Pots or Dirt Bands under glass and will be ready for market three to four weeks earlier. Dirt Bands are simply Paper Pots without bot toms; seeds or plants are put into them, and, by the time they are ready to set out, the plants are put into the ground without taking out of the band, and there is no check in their growth.

Miller's Improved Lock-Process Dirt Pots

Miller's Pots are made of high - grade water - finished board. Briefly, our Pots when locked stay locked; there is no occasion for the sides or bottoms of our Pots to become loose, and they contain no glue to loosen up or become sour, thus attracting insects and fungous diseases.



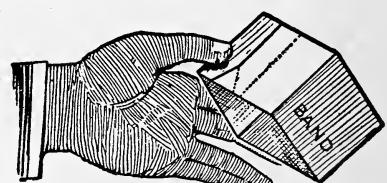
Patent Pending. Note the solid bottom

	500	1,000
2 x 2 x 2.....	\$1 00	\$1 75
3 x 3 x 3.....	1 50	2 75
4 x 4 x 3 $\frac{1}{2}$	2 00	3 75

Special prices on large quantities

Miller's Improved Lock Process Dirt Bands

These Bands are far superior to the flimsy paper kind. Each Band is creased to the exact shape, just fold on creased lines, and then tuck the slits in each other. This makes each plant stand as a unit. You can shift in them the same as you can in a clay pot.



	500	1,000
2 x 2 x 2.....	\$0 75	\$1 10
3 x 3 x 3.....	1 25	2 25
4 x 4 x 3.....	1 65	3 00

Special prices on large quantities



Large Tyer

What Users Think of this Tying Machine

A word in regard to the Saxmayer Vegetable Tyer purchased from you last season. The Saxmayer is a great machine to save time. With it we can tie as fast as two men can handle the bunches, or as fast as four men can tie in the ordinary way. This is a saving of three men. We can tie about 120 dozen in an hour with the motor power which we use. We are very much pleased with the Tyer, and should not like to do without it.—ANDREW NEWLAND & BROS., Millvale, Pa.

We cannot praise the Vegetable Tying Machine any too highly. We think the Saxmayer Tyer is a wonderful machine for, besides doing the work in less time, it saves a vast amount of labor. It is no trouble to tie 60 to 80 dozen bunches of beets, carrots and onions per hour. We think the machine paid for itself in less than two weeks. We run the machine by power, and when it is in operation the work is done very quickly as its speed is unlimited. We intend getting another Tyer when the season opens this spring.—GEO. W. BECKERT & CO., Pittsburgh, Pa.

In regard to your Saxmayer Tyer I will say, after having made use of it all summer, that for all it was a little complicated at the first trial, it has proved a success in my business and proved the best hired man at bunching time.—C. REUTZEL, R. F. D. No. 5, Ewalt Station, Pittsburgh, Pa.

We consider this one of the best labor-saving machines we have in our garden. It has given entire satisfaction. We have bunched 85 dozen bunches of carrots per hour, 55 dozen bunches of beets, and 65 dozen bunches of rhubarb, tying rhubarb at both ends. This work was done by two men making the bunches with one man working the machine. We use one-eighth-horse-power water motor to run the machine.—DICKSON BROS., Gardeners, Neville Island, Pa.

I wish to say a few words in regard to the Saxmayer Vegetable Tyer purchased from you last season. I am very much pleased with it. It saves me the wages of one hired man and is always there to do its work when needed. During the biggest rush I can get the bunching done in good time without working half the night. The machine has more than paid for itself during the past season in saving of time and labor.—JOHN F. BOTT, Elin Grove, W. Va.

Referring to your letter of January 30 the Saxmayer Vegetable Tyer, purchased from you several years ago, has been in use ever since. I consider it an ideal machine in every respect and a grand labor-saving device. It is a dependable machine and I have had very little trouble in keeping it in good working order. I would regret it very much if I had to part with it.

There are no improvements that appeal to me at this time but should I, at any future time, be able to suggest any, I shall be glad to let you hear from me.—G. H. GEYER, Pittsburgh, Pa.

Price, \$125. Small size with same mechanism as the large size, but without table, \$55

Electric motor for either size, \$25 extra

OUR VEGETABLE SEEDS are grown by the most reliable and experienced growers in Europe and America. Our customers will find them true to name and of high quality.

OUR FIELD SEEDS are selected with special reference to their purity and germinating qualities. Our aim has always been to furnish pure seeds rather than to sell inferior seeds, at low prices.

We carry many lines of goods in stock that are not listed in this catalogue, and for this reason invite correspondence regarding the wants of our customers. If we cannot furnish the article inquired for, we will endeavor to inform the inquirer where it can be had.

The Saxmayer Vegetable Tyer

PATENTS PENDING

The Saxmayer Vegetable Tyer is no longer an experiment, as is testified by hundreds of satisfied customers, but is an essential part of every successful market-gardener's equipment. It will save the labor of from three to six persons per day, or a money saving of from \$4 to \$8 per day. The machine will pay for itself in a very few weeks.

The machine somewhat resembles, and is but little larger than a sewing machine, requires less power to run, and may be operated by treadle or driven by belt with a motor or gas engine. It may be kept in constant motion and automatically ties and releases each bundle only when it is placed in position for tying. It works so easily that a child can do more work with it than a number of grown persons could do by hand in the same time. The operator sits comfortably at the machine and does his work in perfect ease.

The machine ties any kind of bunch vegetables except the large dozen-bunches of celery. It uses either a four-ply cord or, by changing the knotter bill, a No. 13 tape.

It takes an expert to tie by hand. If you let a green person do it, you pay big in lost efficiency and poor work.

Mark This One Big Point. In these days of high wages, scarcity of labor, cost of twine, and labor troubles, no bunch gardener can afford to stick to the old methods of bygone days. The advent of the "Saxmayer" Tying Machines leaves no more excuse for tying by hand than there would be to stick to the old tallow candle, ox-cart, or a thousand and one other things which long ago have been thrown into the discard.

Remember that money paid out for hand tying is gone forever, but money paid out for a Tying Machine is with you, serving you day after day, year after year.

Its perfection gives it a tremendous advantage over hand tying as with it an inexperienced boy or girl can do more work and do it better than a number of experts.



Small Tyer

MOTO-MOWER

The Moto-Mower is a gasoline-driven lawn-mower which will do everything a hand mower can do—and in one-fifth of the time.

The designers have succeeded in making a power plant and methods of transmission and control, that keep for the Moto-Mower the simplicity, light weight, and easy control of the hand lawn-mower.

The Moto-Mower is light in weight—and this weight is so distributed over the wheels and wooden roller that the Moto-Mower can be used without injuring soft lawns. The motor consumes about $\frac{1}{8}$ gallon of gasoline per hour.

The Moto-Mower cuts as close to trees, flower-beds, and other features of "landscape architecture" as a hand mower. It can operate on terrace or hillside. This is something other power lawn-mowers cannot do successfully—but a thing that the Moto-Mower does as well as a hand mower.

When the lawn has been cut with a Moto-Mower there is scarcely any more, if any, "finishing off." The superior ability of the Moto-Mower to cut close to objects and to operate in a restricted space is due to its light weight and the easy method for turning on or off the power.

A Twist of the Wrist Does It All

Unlike any other power machine, there are no gears or clutches on the Moto-Mower. The power from the engine is transmitted direct to the cutting reel through chain and sprockets. The friction driving rollers on the ends of the reel shaft are brought gently into engagement with the flange on the inner side of the wheels by simply rotating the handle-bars. This permits the machine to be started or stopped without shock or jar and allows you to turn to right or left or stop instantly.

If the operator comes to some restricted place—a sharp curve or projecting corner—that needs especially careful attention he can shut the power off on one or both wheels or operate the Moto-Mower by hand. A second twist of the wrist and the Moto-Mower moves off again.

SPECIFICATIONS

Width of Cut, 24, 27 and 30 inches.

Cut Adjustment, $\frac{1}{2}$ to 3 inches.

Cutting Speed, 2 to 3 miles per hour.

Cutting Capacity, 5 acres per day.

Climbs, 30 per cent grade.

Gasoline Consumption per day, about 1 gal.

Weight, 24 inches, 160 lbs.; 27 inches, 180 lbs;

30 inches, 190 lbs.

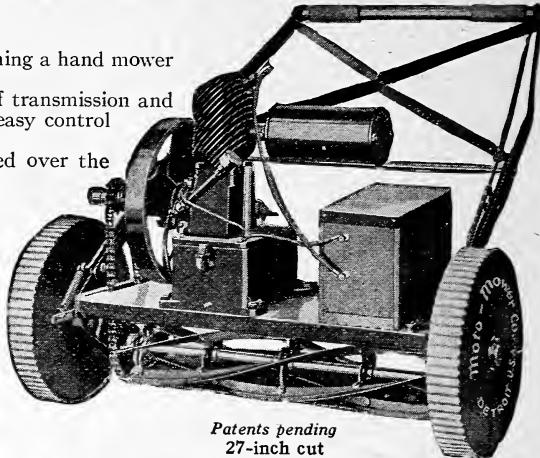
Shipping Weight (Crated) 250 lbs.

Color, French Grey, Gold Striping.

Blades, 5, Crucible Steel.

Price, 24-inch, \$165; 27-inch, \$195; 30-inch, \$225

Patents pending
27-inch cut



MOTOR

Bore, $2\frac{1}{2}$ inches.

Stroke, $2\frac{1}{2}$ inches.

Horse Power, $1\frac{1}{2}$ S. A. E.

Speed, 900 to 1200.

Ignition, Battery.

The Genuine Philadelphia Lawn-Mower

Four blades, 10-inch wheel, $6\frac{1}{2}$ -inch cylinder, train of three gears, double ratchet.

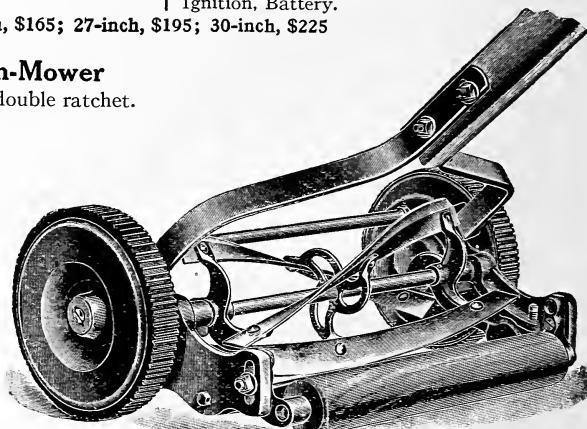
Style "A" All Steel. This is the lightest draft Lawn Mower made, and, being made entirely of steel, it is by far the most durable. It has no competitor. 15-in., \$22; 17-in., \$24.50; 19-in., \$27.25; 21-in., \$30.

Blue Grass Lawn-Mower

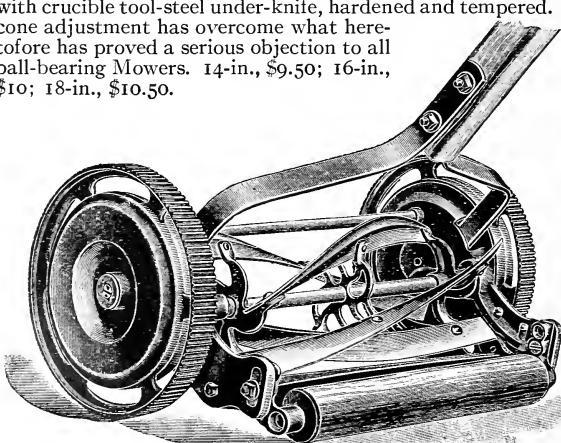
The Blue Grass Lawn-Mower has 8-inch drive wheel, shaft $\frac{1}{2}$ inch diameter in adjustable plain bearing box, and three tempered tool-steel knives on reel. In the Blue Grass Lawn Mower we have the best value that has ever been offered in a low-price machine. 12-in., \$6.50; 14-in., \$6.75; 16-in., \$7; 18-in., \$7.25.

Wizard Ball-Bearing Lawn-Mower

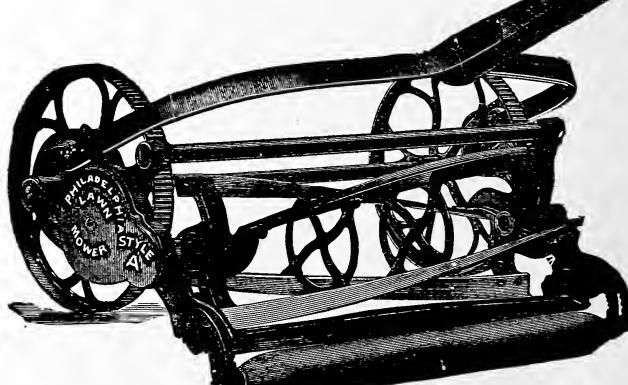
In the Wizard we offer a high-grade Lawn-Mower at a low price. It is equipped with 9-inch drive wheels, four tempered tool-steel blades with crucible tool-steel under-knife, hardened and tempered. The patent cone adjustment has overcome what heretofore has proved a serious objection to all ball-bearing Mowers. 14-in., \$9.50; 16-in., \$10; 18-in., \$10.50.



Wizard Ball-Bearing Lawn-Mower



Blue Grass Lawn-Mower



Genuine Philadelphia Lawn-Mower

SPRYWHEEL

Side-Cutting Power Lawn Mower

(Patents Allowed and Pending)

This is our latest development and is the successful culmination of long experiments to produce a light-weight, compact, and inexpensive Lawn Mower with the desirable feature of carrying a substantial grass-catcher. This sturdy little machine is light enough to be easily handled and small enough to work in restricted places. It is easy to start, simple to operate, and economical to run, and with it one man can do a superior job of lawn-mowing over an area as great as that covered by several men working with hand mowers only. It turns easily and works close up to trees, shrubbery, walks, and fences. People entrusted with the care of extensive lawns of suburban estates, of country clubs, of parks, find the Sprywheel an efficient, economical Power Lawn Mower. It is so easily guided that a minimum of hand trimming is necessary around decorative shrubs, flower-beds and along the edges of winding paths. Weight, 180 pounds.

PRICE

Complete, with Sprywheel $2\frac{1}{2} \times 2\frac{1}{2}$ inch, Air-Cooled Engine, 20-inch cut Lawn Mower, and Canvas Grass-Catcher \$150. F. O. B. factory. Ask for special circular.

Easy Emptying Grass Catchers

With Handle and Hook Brackets. Quickly Attached and Detached
Simple, Practical, Durable

No. 10G. Galvanized; fits 12- to 18-in. mower \$2 00
No. 12G. Galvanized; fits 16- to 22-in. mower 2 40

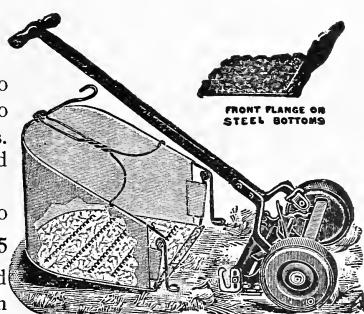
Galvanized sheet steel bottom. Round back, heavy duck sides. Projections on the bottom prevent grass from slipping forward while moving.

No. 26G. Galvanized; fits 12- to 16-in. mower ... \$1 50
No. 27G. Galvanized; fits 16- to 20-in. mower ... 1 65

Has a central handle which gives a balanced grip and permits of the Catcher being carried with one hand when filled with grass. Galvanized bottom.



No. 26G



No. 10G



Dunham Water-Weight Lawn Roller

This Roller has a steel drum into which water can be poured until the Roller is just the weight for the work at hand.

For soft lawns it will not need so much water, while for firm turf, tennis-court or drives it can be made as heavy as desired. When through rolling, all water is emptied out and the Roller is light enough to be easily handled and put in the basement or garage.

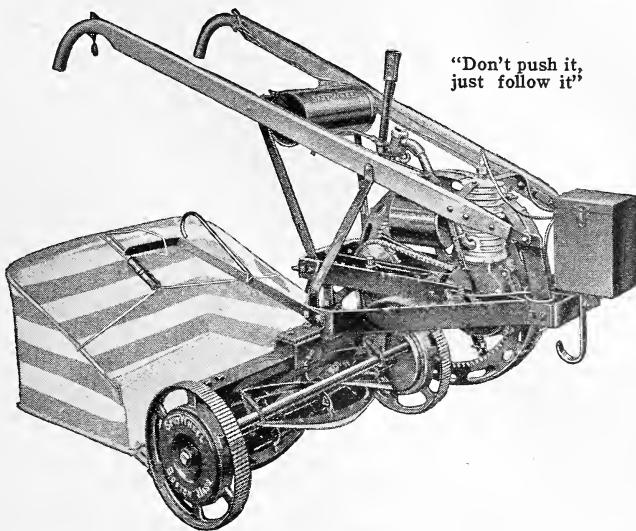
The drum is made of heavy steel plates, carefully welded to form a solid one-piece container for the water.

No.	Diameter inches	Length inches	Sec- tions	Weight empty	Weight filled with water	Price
WB 5	18	24	I	85 lbs.	300 lbs.	\$18 00
WB 7	24	24	I	110 lbs.	500 lbs.	21 00

When filled with sand they weigh at least 50 per cent. more than with water.

GARDEN SEEDS. We have been supplying the most critical market-gardeners for more than forty years with vegetable seeds. Whether you buy in packets or in pounds, pints, or bushels, you get the same fresh stock we furnish the largest market-gardeners. No order is too small to merit our best attention. Our stock is fresh from the most reliable growers of Europe and America.

"Don't push it,
just follow it"



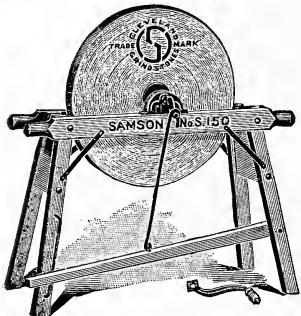
The Sterling Grindstone

(BALL-BEARING)

A steel tubular frame, mounted Grindstone. Ball-bearing throughout. Absolutely the best mounted Grindstone on the market.

A double-treadle frame embracing the bicycle features of our bi-treadle. All rods and bolts are threaded; there are no cotter pins and no loose parts. Permanent rigidity is insured. Provided with a large comfortable seat and clothes protector.

Fitted on crank and shaft with improved ball bearings—encased—consisting of a heavy steel ball casing and a cone or sleeve turned out of solid cold-rolled steel shafting, balls cannot work loose or drop out. Weight of stone, 50 to 60 lbs. Price, \$9.50.



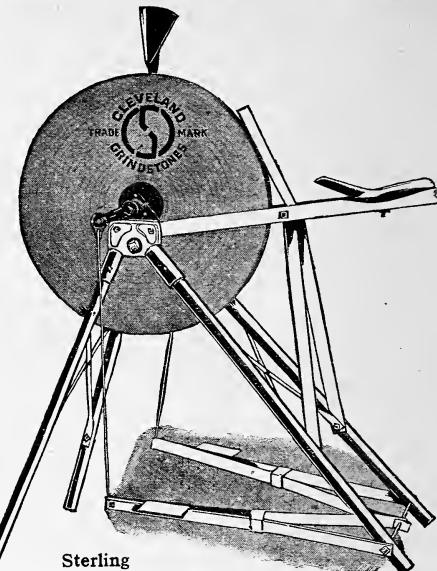
Samson Mounted Grindstone

Samson Mounted Grindstone

Specially Selected Stone

The frame is made of the best seasoned hardwood. The legs are securely framed into the sidebars and fastened by a bolt. The ends of the sidebars are neatly turned to serve as handles.

No. 150 Stone, weighs 100 to 110 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches.....	\$7.75
No. 155 Stone, weighs 70 to 80 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches.....	7.25
No. 160 Stone, weighs 40 to 50 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches.....	6.50



Sterling



Improved Ball-Bearing Family Grindstone

Empire Power Grindstone

The Empire Ball-bearing Power Grindstone is designed to meet the needs of the farmer who desires a grindstone to be operated by a gasoline engine. The Empire not only possesses the needed strength and staunchness to withstand the strenuous service of everyday use, but is of light weight and easily handled. The Empire is equipped with genuine Berea Stone, 24 inches in diameter and 2 inches to $3\frac{1}{2}$ inches thick. This is the most efficient and the best grit produced for general use and especially for farm tools. Weight, complete, about 225 lbs. Price, complete, with pulley and crank handle, \$25.



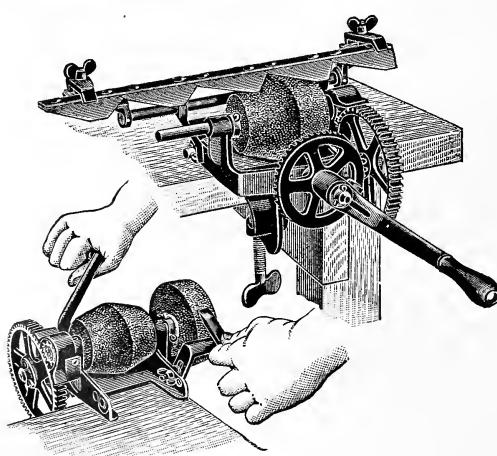
Empire Power Grindstone

Improved Ball-Bearing Family Grindstone

The best family Grindstone made, without exception. Supplied with a fine specially selected Berea Grindstone, turned and rubbed smooth, mounted on a steel shaft and steel ball bearings. Prices no higher than for the ordinary style.

	Postpaid	Postpaid
8-inch.....	\$3.00	\$3.25
10-inch.....	3.50	3.75

No kitchen equipment is complete without one of these Grindstones. Will last a lifetime



Carborundum Grinder

Carborundum Grinder

This machine is especially adapted to work on the farm. It is equipped with a simple, practical device for sharpening mower-section knives, a double bevel carborundum wheel for this work, a special tool wheel and a tool-rest. Each wheel is mounted on a special iron center. The machine is strong, durable, and most convenient for sharpening all edged farm tools. The Grinder is converted into a tool-grinding machine by simply attaching the special tool wheel to the end of the shaft. The double bevel carborundum wheel is $3\frac{1}{2}$ inches in diameter and $3\frac{1}{2}$ inches wide. The carborundum tool wheel is 4 inches in diameter by $1\frac{1}{4}$ inches thick. Price, \$7.50.

Carborundum Scythe Stones

Carborundum Scythe Stones must not be classed with the ordinary Scythe Stones. The old style stones are merely sandstone. They simply rub the edge on. Carborundum cuts it—fast and clean. 10 in. 30c., 12 in. 35 cts., 10 in. (heavy) 35 cts.



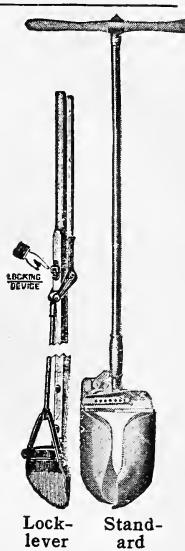
POST-HOLE DIGGERS

Standard Earth Augers

Standard Earth Augers are "standard" because they will do the most work in the shortest time with the least labor, and are made of the highest grade material. It is the only Auger made having movable blades which open to discharge contents. Will dump sticky clay with ease. Can be instantly adjusted to bore many different-sized holes. In fact, it has no equal for any kind of earth-boring. It bores seven different-sized holes—8, 9, 10, 11, 12, 13, and 14 inches in diameter and $3\frac{1}{2}$ feet deep. The stem can be fitted with pipe extension to bore extra-deep holes or wells. \$5.25 each.



Open Universal Closed



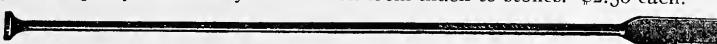
Lock-lever Standard

Universal

It has cast steel blade of best quality, strong, durable and easily operated. Works in all kinds of soil, clay, sand, gravel, shale, etc. \$2.75 each.

Lock Lever

The best implement ever put into the ground for the purpose of digging holes. It is easily operated. A boy can work with it. A trial will convince anyone that it will save its cost in a few days' use. The cast steel blade is fitted with automatic self-lock which locks the blade at right angles so that both hands may be used in lifting the ground out of the hole. Works equally well in any kind of soil from muck to stones. \$2.50 each.



Tamping Head Steel Digger

All-steel, long and wide cutting blade with large tamping head made of 1-inch round steel; length over all 5 feet, 9 inches. \$1.75 each.

Wood-Chopper's Wedges

No. 136. Square head; axe finish; weight 3, 4, and 5 lbs. 10 cts. per lb.

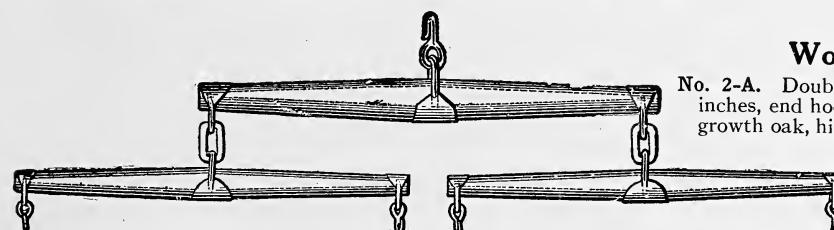
No. 137. Round head; Truckee Pattern; weight 3, 4, and 5 lbs. 11 cts. per lb.



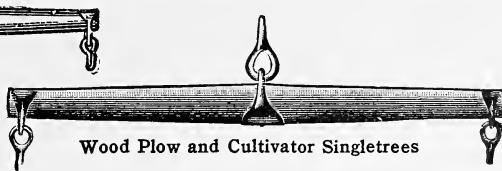
Truckee Pattern

Wood Plow Doubletress

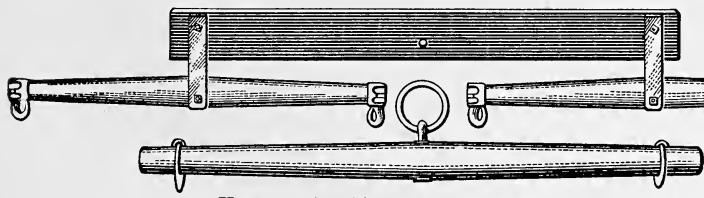
No. 2-A. Doubletree $3\frac{1}{2}$ x 38 inches, singletrees $2\frac{3}{4}$ x 34 inches, end hook $\frac{3}{8}$ inch. The above set made from second-growth oak, hickory, and ash, painted red. Complete \$4.25.



Wood Plow Doubletress



Wood Plow and Cultivator Singletrees



Harvester Doubletress and Yoke

Wood Plow and Cultivator Singletree

WITH HOOK IN CENTER

26-inch.....	\$1 00
28-inch.....	1 10
30-inch.....	1 20
32-inch.....	1 30

Harvester Doubletress and Yoke

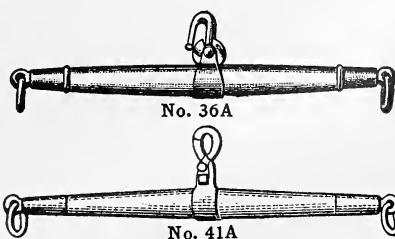
No. 46A. Complete hitch for land-rollers, hay rakes, tedders, mowing machines or any implement where flat doubletree is used. Painted red. Complete, including doubletree, singletrees and yoke, \$2.75.



Team Neck Yokes Ironed

Team Neck Yokes Ironed

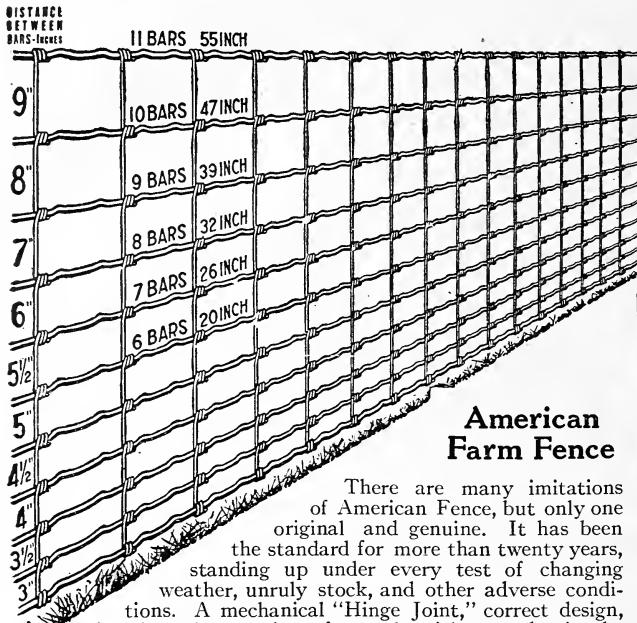
No. 31A. Made from second-growth oak, hickory, or ash. 3-inch; 42 inches or 48 inches long; ring $\frac{5}{8}$ inch thick, $3\frac{1}{2}$ inches diameter. \$1.75 each.



Breast Yokes

MADE FROM HICKORY

No. 36A. $1\frac{3}{4}$ - or 2-inch; 22 inches long. \$1 15
 No. 41A. Snap with band around center, $1\frac{3}{4}$ - or 2-inch; 22 inches long. \$1 15
 Neck- and Breast-Yokes painted red.



American Farm Fence

There are many imitations of American Fence, but only one original and genuine. It has been the standard for more than twenty years, standing up under every test of changing weather, unruly stock, and other adverse conditions. A mechanical "Hinge Joint," correct design, full-size wires and perfect galvanizing, make it the most economical and durable fence on the market.

The wire used in American Fence is just right for fence purposes—not too hard or too soft. It is tough and strong, having just enough spring to give it the "life" required in a woven wire fence, and can be spliced in the field with ordinary fence tools. It is galvanized by a superior galvanizing process.

When you buy American Fence you get full weight, full-gauge wires, full-length rolls, and the heaviest and smoothest galvanizing. Each stay in American Fence is a separate and distinct wire, making what is known as a "Hinge Joint" Fence. By the use of this "Hinge Joint," should severe or unusual pressure be brought against the Fence, when this pressure is removed the fence will resume its original position.

It also has the tension curve which provides for the expansion and contraction during warm and cold weather, enabling the Fence to retain its normal position under these varying conditions.

PRICES PER ROD

Style A. Top wire No. 9, bottom wire No. 10, Intermediate and stay wires No. 11

Put up in 20-rod rolls.

Per rod

No. 832. 32 in. high, 8 bars, 6-in. stays, weight 11 lbs... \$0 50

No. 939. 39 in. high, 9 bars, 12-in. stays, weight 9½ lbs. 42

No. 1047. 47 in. high, 10 bars, 12-in. stays, weight 11 lbs... 47

No. 1155. 55 in. high, 11 bars, 12-in. stays, weight 12 lbs... 53

In 10-rod rolls 25 cts. per roll extra

Style D. All wires including stays No. 9

Put up in 20-rod rolls.

Per rod

No. 832. 32 in. high, 8 bars, 6-in. stays, weight 17 lbs... \$0 73

No. 1047. 47 in. high, 10 bars, 12-in. stays, weight 16 lbs... 68

No. 1155. 55 in. high, 11 bars, 12-in. stays, weight 18 lbs... 76

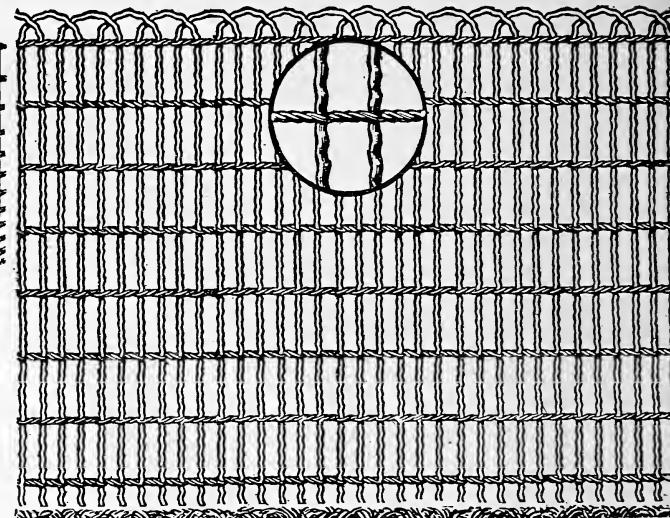
In 10-rod rolls 25 cts. per roll extra

Staples. 1¼-inch. 8 cts. per lb.

We have listed above the most popular sizes and styles which we carry in stock at Pittsburgh. We will send on request a complete catalogue of American Fences, any of which can be shipped direct from factory.

Other Sizes and Styles

We have listed above the most popular sizes and styles of Fences and Gates which we carry in stock at Pittsburgh. We will send, on request, a complete catalogue of Lawn Fences and Gates, any of which can be shipped direct from factory.



American Lawn Fence

The American Lawn Fence belongs to the class of woven wire fences where grace of fabric is linked with usefulness, strength, and lasting qualities. As such it is largely used around lawns, for the fencing of front yards, for flower-beds, for division fences between residences and in many ways where utility and beauty are to be combined.

The American Lawn Fence is made of stiff steel wire pickets of all No. 9 wire, firmly bound together with lateral cables made up of two strands of No. 12 tough steel wire—all thoroughly galvanized to be proof against weather conditions.

This fence is of the greatest durability and strength, and holds its shape admirably when stretched taut and firmly fastened as all fences should be.

The crimp in the pickets increases the strength and beauty of the fabric.

The close spacing between the pickets not only makes it unclimbable, but keeps out smaller animals.

PRICES per roll of 150 feet

Style B. Pickets 1¼ inches apart

Height 42 in.; weight per roll, 286 lbs., per roll \$21 00

Height 51 in.; weight per roll, 333 lbs., per roll 26 00

American Lawn Walk Gate

Filled with a heavily galvanized ornamental fabric. Pickets 1¾ inches apart

American Lawn Walk Gates are handsome, strong, and durable. They are especially designed for residences and when combined with American Lawn Fence make a most pleasing and attractive appearance.

Pickets in the filler are made of heavily galvanized No. 9 crimped wire. Horizontal cables are made up of No. 12 galvanized wires.

PRICES

For 3-foot opening, 42 in. high; weight 22 lbs..... \$4 25

For 3-foot opening, 51 in. high; weight 25 lbs..... 4 50

Above prices include fixtures for wood posts and are f.o.b. mill if not in stock. Add 50 cts. for fixtures for steel posts.

Blue Ribbon Poultry Fence

Top and Bottom Wires No. 15½. All Other Wires, including Stays, No. 17

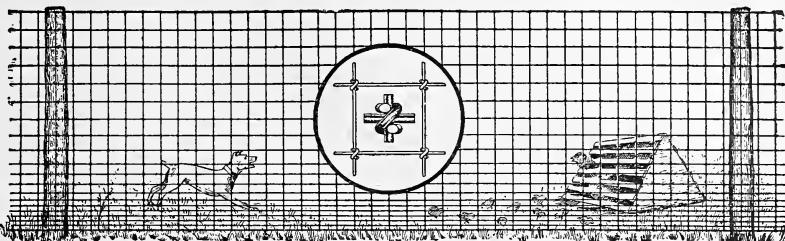
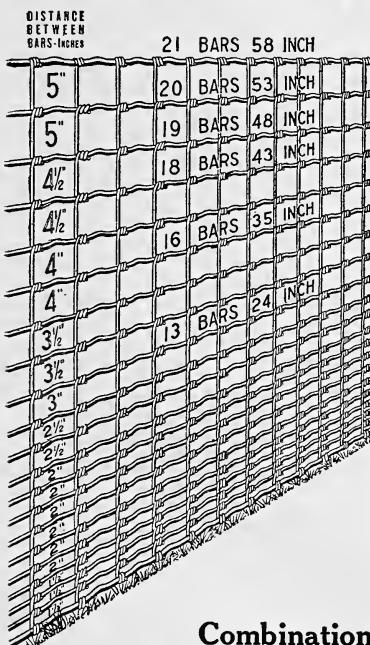
Strength—Durability—Protection—Beauty—Economy—Ease of Handling

These are the features of the ideal Poultry Fence sought for by all buyers. In fact, these are practically all the good points any fence-user could wish for, and they make Blue Ribbon truly a "blue ribbon" Poultry Fence.

The ease of handling Blue Ribbon Fence is a joy to the average busy man, be he farmer or poultryman. With well-braced end posts, the entire length of the fence is stretched at one operation, is easily nailed to the posts—and the job is done. No top railing or bottom board is necessary—no laborious stretching between posts—no baggy, ungainly fence after all is completed.

The strength of Blue Ribbon Poultry Fence is established by its heavy wires just twice the size of the wires used in ordinary 2-inch poultry netting—also by its superior weave. Everything considered—material, labor, and wire—Blue Ribbon Fence costs only one-half the cost of netting and lasts several times as long.

The one-piece stay (up and down wire) gives the fence greater rigidity—makes it self-supporting without the top rail and bottom board used in netting. The famous Square Deal Knot never slips.



Protection to growing chicks is only obtained by a strong, well-stretched fence with line wires close enough together so the chicks cannot possibly crawl out and stray away. Blue Ribbon line wires at the bottom of the fence are only one inch apart.

The first four spaces of Standard Blue Ribbon Fence, between strand wires, commencing at the bottom, are 1 inch, then 1 1/8 inches, 1 1/4 inches, 1 1/2 inches, 1 3/4 inches, 2 inches, 2 1/4 inches, 2 3/4 inches, 3 1/8 inches, and above this 4 inches. The stay wires (up and down wires) are only 4 inches apart.

Prices per 10-Rod Roll, Standard Spacing

No. 1424.	24 inches high, 14 strands.	\$3 65
No. 1736.	36 inches high, 17 strands.	4 70
No. 2048.	48 inches high, 20 strands.	5 50
No. 2360.	60 inches high, 23 strands.	6 50
No. 2672.	72 inches high, 26 strands.	7 45

American Poultry and Garden Fence

There are many imitations of American Fence, but only one original and genuine. It has stood the test of twenty years.

The wire used in American Fence is just right for fence purposes—not too hard nor too soft. It is tough and strong, having just enough spring to give it the "life" required in a woven wire fence, and can be spliced in the field with ordinary fence tools. It is galvanized by a superior galvanizing process. When you buy American Fence you get full weight, full gauge wires, full-length rolls, and the heaviest and smoothest galvanizing. Each stay in American Fence is a separate and distinct wire, making what is known as a "hinge joint" fence. By the use of this "hinge joint," should severe or unusual pressure be brought against the fence, when this pressure is removed the fence will resume its original position.

It also has the tension curve which provides for the expansion and contraction during warm and cold weather, enabling the fence to retain its normal position under these varying conditions.

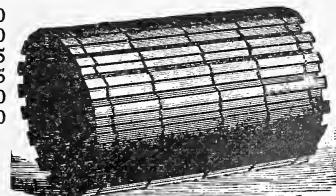
Spacing between bars from bottom to top in inches: 1 1/2, 1 1/2, 1 1/2, 2, 2, 2, 2, 2, 2 1/2, 2 1/2, 3, 3 1/2, 3 1/2, 4, 4, 4 1/2, 4 1/2, 5, 5.

Top and bottom wires are No. 11 gauge. All other wires, including stays, No. 14; stay wires 6 inches apart.

Prices per 165-Foot Roll

No. 1324.	24 inches high, 13 bars	\$4 50
No. 1635.	35 inches high, 16 bars	5 50
No. 1843.	43 inches high, 18 bars	6 25
No. 1948.	48 inches high, 19 bars	6 75
No. 2053.	53 inches high, 20 bars	7 00
No. 2158.	58 inches high, 21 bars	7 50

Staples for above, 10 cts. per lb.



Combination Picket Fence

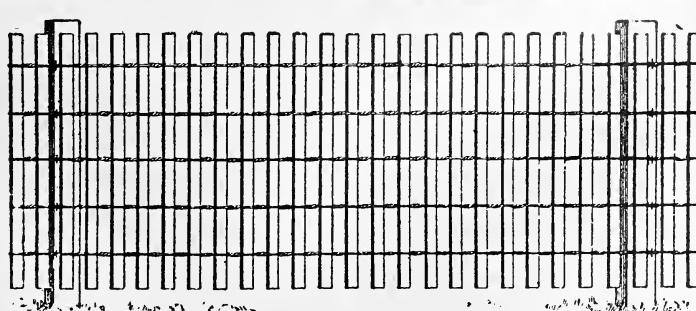
This popular Fence for gardens, yards, vacant lots, etc., is made of good oak pickets 1 1/2 inches wide, 3/8 inch thick, and 4 feet long, woven together, 2 1/2 inches apart, with five cables of No. 12 galvanized wire. No rail is required. We make this Fence to order in quantities to suit the purchaser.

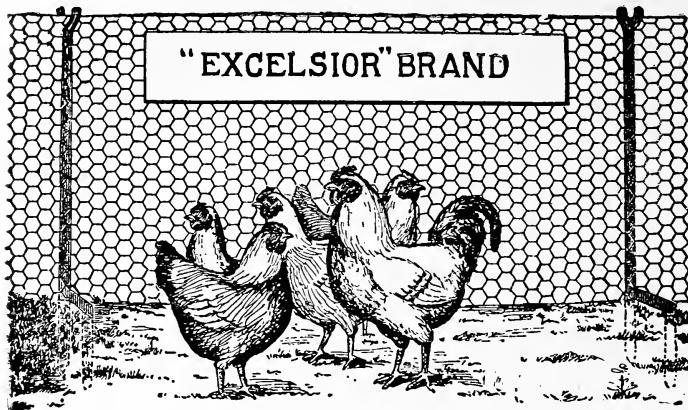
PRICES

Less than 75 feet, per foot	\$0 11
75 feet and upwards, per foot	10

Union Lock Poultry-Yard Gates

6 feet high, 3 feet wide	\$4 00
7 feet high, 3 feet wide	4 50





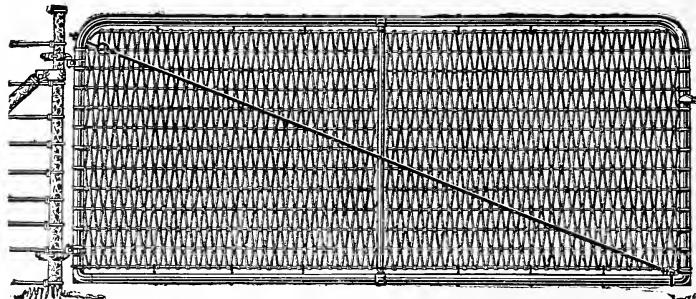
American Poultry-Yard Gates

American Steel Gates, always efficient and well designed, have been improved both in structure, finish and operation. The tubular steel frames combine great strength, durability, and beauty. Gates and fittings are thoroughly galvanized.

American frames are covered or filled with a 2-inch mesh fabric of truss form, which not only proves a barrier to the smallest animals while lending bridge-like rigidity and strength, but also makes the gates unclimbable. The combination of the frame and the truss filling produces the highest type of fence gate, answering every requirement of good engineering practice.

PRICES

	Each
For 3-foot opening, 42 inches high; weight 19 lbs.	\$4.00
For 3-foot opening, 50 inches high; weight 21 lbs.	4.25
For 3-foot opening, 58 inches high; weight 23 lbs.	4.50
Above prices include fixtures for wood posts. For fixtures for steel posts, add 50c.	



Above prices include fixtures for wood posts. F.O.B. factory if not in stock. For fixtures for steel posts, add 75 cts.

"Can't Sag" Gates

"Can't Sag" Gate 52 inches high made of five 6-inch boards spaced as follows from bottom to top: $2\frac{3}{4}$, $4\frac{3}{4}$, $7\frac{1}{4}$, and $8\frac{1}{4}$ inches apart.

"Can't Sag" Gates are neither all wood nor all steel but a happy combination of the two. They retain all good features of wood Gates and the advantages of steel Gates, but have none of the drawbacks of either. They last longer than any other Gate you can build or buy. They weigh only half as much as ordinary all-wood Gates and are far stronger than any steel, wire, or gas pipe Gate made. They "Can't Sag" even a quarter of an inch. Your stock can see them plainly and can't injure themselves by running into or crowding against them.

If a board breaks it doesn't let the Gate sag or fall down, you simply slip out the broken board and replace it with a new one and in five minutes you have another perfect "Can't Sag" Gate as good as new and repaired at the cost of one board and a few minutes' spare time. "Can't Sag" Gates are the neatest, trimmest looking Gate ever put up. 12 feet long, 52 inches high, \$9; 10 ft. \$8.25.

"Can't Sag" Gate Steels

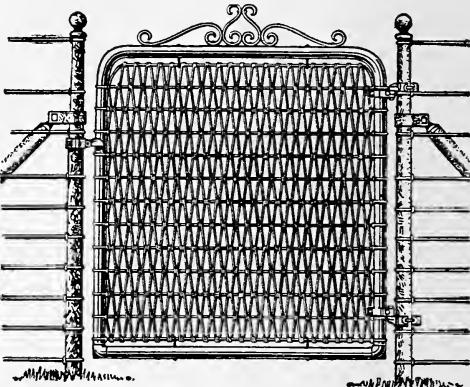
For the farmer who prefers to furnish his own lumber and make his own Gate we furnish all irons necessary to build the Gate as shown above—everything except the boards. This includes 4 pairs of Angle Steel Uprights, Double Truss Braces, Hook Lag Screws, Hinges, Bolts, Washers, Lightning Socket Wrench, directions, etc. Price of set complete, \$4.

Diamond Mesh Poultry Netting

Made from No. 20 gauge wire and galvanized after weaving. Put up in 50- and 150-foot rolls

	2-inch mesh	1-inch mesh
Height	50 ft.	150 ft.
1 foot	\$0 70	\$1 50
1 1/2 feet		2 00
2 feet	1 10	2 50
2 1/2 feet		3 00
3 feet	1 50	3 50
4 feet	2 00	4 50
5 feet	2 50	5 75
6 feet	3 00	6 75

Staples 10 cts. per lb.



American Single Drive Gates

With galvanized tubular steel frame, filled with a 2-in. diamond mesh galvanized fabric which is unclimbable

A strong, non-climbable, and economical farm Gate. Universally recognized for its simplicity and durability. In addition to upright tubular brace the frame is supported by a diagonal brace rod which keeps it firm and prevents sagging.

PRICES

	Each
For 10-ft. opening, 42 in. high; weight 56 lbs.	\$8.50
For 10-ft. opening, 50 in. high; weight 61 lbs.	8.75
For 10-ft. opening, 58 in. high; weight 67 lbs.	9.00
For 12-ft. opening, 42 in. high; weight 65 lbs.	9.00
For 12-ft. opening, 50 in. high; weight 71 lbs.	9.25
For 12-ft. opening, 58 in. high; weight 77 lbs.	9.50



American Galvanized Steel Fence Posts

"The Post Without a Fault"

The New American Galvanized Post surpasses all others in Strength—Durability—Economy.

The cylindrical shape gives greater resistance at the ground line and makes it easier to drive the post. The Line Posts are $14\frac{1}{2}$ gauge and all parts are hot galvanized inside and out. Posts are galvanized after being formed and punched, all parts being protected by galvanizing. Line Posts, when driven, open automatically, providing self-anchorage.

Twenty years of actual service is convincing proof of the lasting quality of the American Post. Nothing adds more to the appearance of a farm than fence stretched on neat, uniform, and sightly steel posts.

For woven-wire fence, barb wire, and plain wire.

Line Posts

	Each
5-foot; weight 7 lbs.	\$0 50
6-foot; weight 8.4 lbs.	55
6½-foot; weight 9.1 lbs.	57
7-foot; weight 9.8 lbs.	62
7½-foot; weight 10.5 lbs.	66

Sizes carried in stock 6½-, 7-, and 7½-foot. Special prices on lots of 25 posts and upward.

End and Corner Posts

For Setting in the Ground

	Each
End Posts. 7-foot; weight 76 lbs.	\$4 50
7½-foot; weight 83 lbs.	5 00
8-foot; weight 88 lbs.	5 25
Corner Posts. 7-foot; weight 125 lbs.	7 50
7½-foot; weight 128 lbs.	7 75
8-foot; weight 133 lbs.	8 00

For Setting in Concrete

	Each
End Posts. 7-foot; weight 51.8 lbs.	\$2 75
7½-foot; weight 55.3 lbs.	3 00
8-foot; weight 59.3 lbs.	3 25
Corner Posts. 7-foot; weight 72.9 lbs.	4 00
7½-foot; weight 77.7 lbs.	4 25
8-foot; weight 83.4 lbs.	4 50

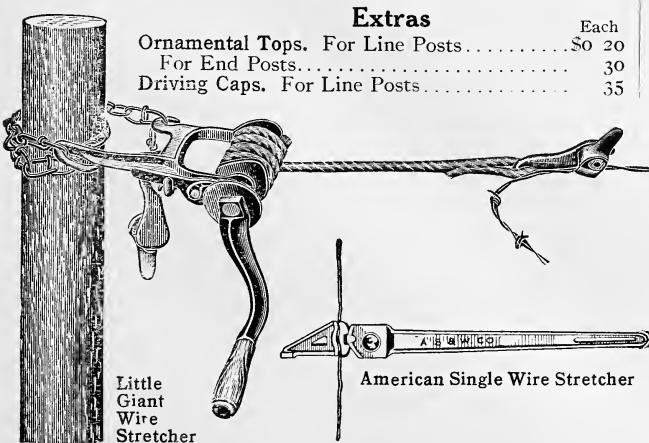
All End Posts are equipped with one brace, Corner Posts with two braces. Shipped complete with all fittings ready to set in ground or concrete. All End and Corner Posts shipped direct from factory.

Extras

	Each
Ornamental Tops. For Line Posts	\$0 20
For End Posts.	30

	Each
Driving Caps. For Line Posts	35

Little
Giant
Wire
Stretcher



American Single Wire Stretcher

Special Barb Wire

Our Special Barb Wire is made of No. 14 galvanized, strong steel wire, and has a breaking strength of 1,000 pounds. The barbs are short and humane.

80-rod reel

Two-Point Cattle. Barbs about 5 inches apart. \$2 45

Two-Point Hog. Barbs about 3 inches apart. 2 60

Regular Barb Wire

Made from No. 12 galvanized wire. We can furnish in different styles as follows:

80-rod reel

Two-Point Cattle. Barbs about 5 inches apart. \$3 20

Two-Point Hog. Barbs about 3 inches apart. 3 40

Four-Point Cattle. Barbs about 5 inches apart. 3 50

Four-Point Hog. Barbs about 3 inches apart. 3 80

If preferred we can furnish above in regular reels weighing from 100 to 120 pounds at \$4 per 100 pounds.

Galvanized Plain Wire

100-lb. roll

No. 9. \$3 60

No. 10. 3 65

No. 11. 3 70

No. 12. 3 75

Galvanized Coil Spring Wire

No. 9. Price per 100 lbs. \$3.65.

Galvanized Staples

1- or 1½-inch. Price per lb. 8 cts.

1- or 1¼-inch. Price per 100-lb. keg \$4.

Wire Nails

100-lb. keg

20d Common Nails. \$3 25

10d Common Nails. 3 45

8d Common Nails. 3 55

9d Common Nails. 3 55

Prices on other sizes quoted on request. Prices subject to change without notice.

Special prices will be quoted on any of the above wire in ton or half-ton lots

Cheney Fencing Tool



This tool is simply a Plain Face Hammer weighing 1 pound and 4 ounces, with a $\frac{1}{4}$ inch hole bored in the neck. It is fully warranted as a Hammer as well as a Fencing Tool.

Directions. Take two broken wires, A and B; make loop in A; pass end of B through loop in A, then through hole in neck of hammer and take turn so wire will not slip; straddle B with claws; use hammer as lever for tightening B. Claws will grip wire, making perfect lever. When wires are tight, simply turn entire hammer around B, making splice. Price, \$1.25; postpaid, \$1.35.

Little Giant Wire Stretcher

The Little Giant Wire Stretcher is the best crank stretcher made. It is constructed entirely of malleable iron. \$1.25; postpaid, \$1.40.

American Single Wire Stretcher

Made of malleable iron. Absolutely the best Single Wire Stretcher in the world. It is just what you want for stretching barbed and plain wire. \$1.25; postpaid, \$1.40.

HARVESTING MACHINERY

We have space to describe but a few of our harvesting tools. If you are in the market for a Binder, Mower, Rake, Tedder, or any other harvesting machinery, write us for special catalogue and prices. Our line is complete and our machines are guaranteed.

Moline Binders and Mowers

We have sold the Moline Binders and Mowers for the past thirty years and do not hesitate to recommend them as equal to, and, in many respects, superior to all other makes.

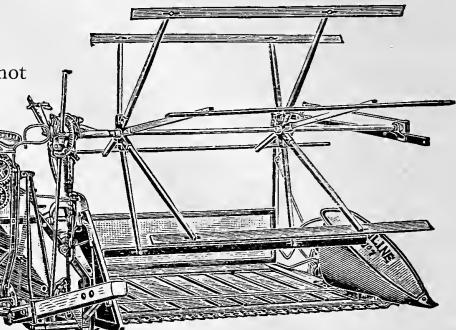
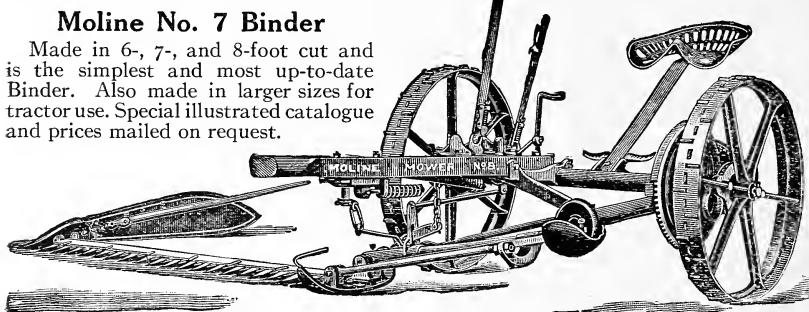
Investigate before buying and you will have but one choice—Moline Binder. Considered by those who know, to be the surest tying and the simplest knotter made—no toggles or delicate parts to get out of order. Any boy can adjust a Moline knotter. Only one set screw to tighten or loosen as the case may be.

Binder is driven direct from gear shaft. Chain has nothing to do but drive the binding parts. No extra strain on the elevator chain, which means no chain trouble.

Rollers have self-aligning boxes which always run free no matter what position.

Moline No. 7 Binder

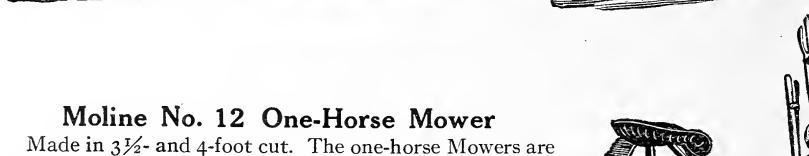
Made in 6-, 7-, and 8-foot cut and is the simplest and most up-to-date Binder. Also made in larger sizes for tractor use. Special illustrated catalogue and prices mailed on request.



Moline No. 7 Binder

Moline No. 8 Two-Horse Mower

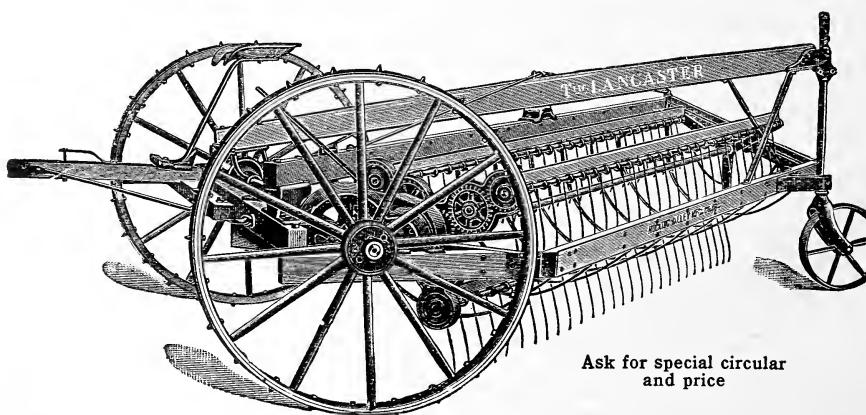
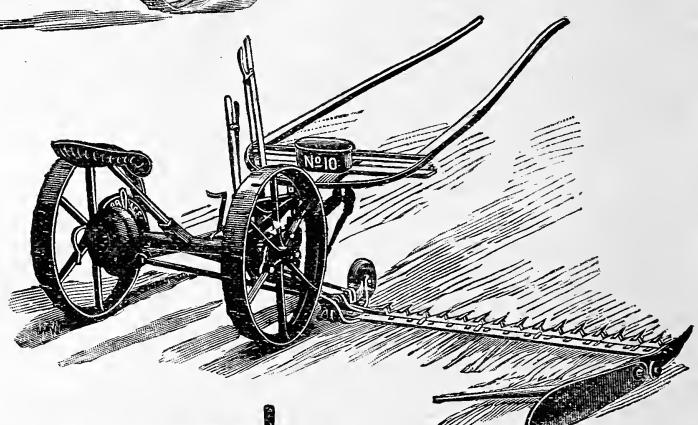
Made in 5-, 6-, 7-, and 8-foot cut. The Spring hitch relieves the jar on the horses; crank shaft has bronze bearings; knife always in line; steel bearing plates for knife; no broken knife-heads. The Moline Mower is of lighter draft, and will do cleaner and better work than other Mowers. Special catalogue and prices on request.



Moline No. 12 One-Horse Mower

Made in 3½- and 4-foot cut. The one-horse Mowers are much used on golf-courses and large lawns, cutting closely the short, soft grass and giving in such work the same satisfaction that they give in the hayfield.

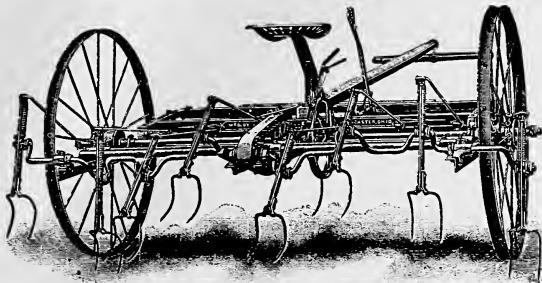
Moline Harvesting Machines give the best service for the longest time at the least expense. They are the simplest and best proportioned, the lightest in draft. Write for special catalogue and prices.



Ask for special circular and price

The Lancaster Side Delivery Rake

In the construction of the "Lancaster" Side Delivery Rake, which is comparatively new, we have combined all the good points, and avoided all the faults of those that have gone before. It is simple, durable, well made, easily operated, and perfectly satisfactory in its work. It gathers up the hay, free from dust and dirt, into a continuous, loose and fluffy windrow, through which the air freely passes. In capacity, it is equal to any Rake of the kind made, and greater than most of them.

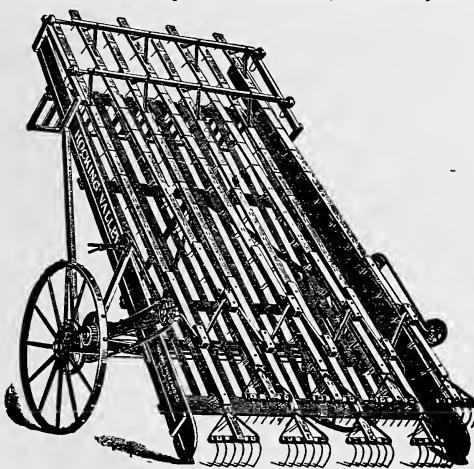


Hocking Valley Steel Tedder

The Wheels are very heavy and have abundant strength to stand in any territory.

The Draft Frame and the tedder frame are connected by two steel springs, one on each side, which act as a sort of cushion to the tedder frame, counteracting the jar and motion caused by the rapid action of the forks. The machine is thrown in and out of gear, even while at work, by means of an upright lever within easy reach of the driver.

Six-Fork Tedder, with combined pole and shafts.....\$54 00
Eight-Fork Tedder, with pole, doubletrees, and neckyoke. 59 00



Hocking Valley Hay Loader—8 Foot

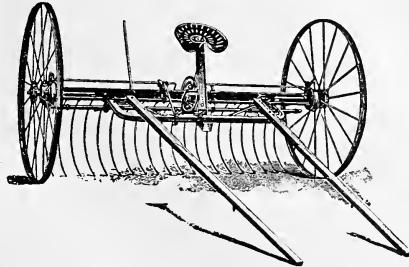
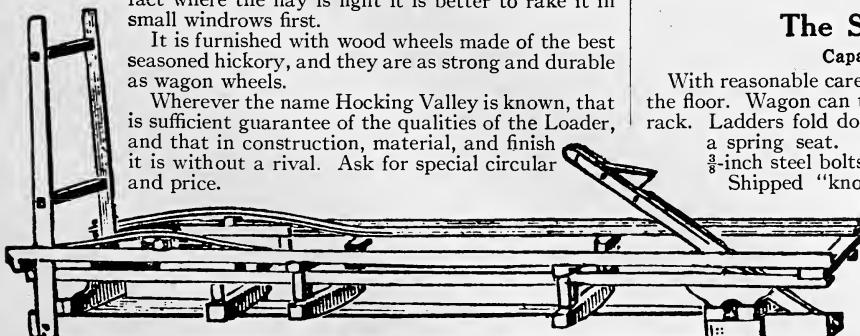
The Hocking Valley Hay Loader is carefully and thoroughly constructed from the very best selected material and is guaranteed to do its work.

It is so nicely balanced on the axle that it is neither top-heavy, nor do the teeth drag on the ground with unnecessary weight. It is acknowledged to be the lightest of draft of any Loader made.

It is intended principally as a swath Loader, but will work with equal satisfaction in windrows that are not excessively large. In fact where the hay is light it is better to rake it in small windrows first.

It is furnished with wood wheels made of the best seasoned hickory, and they are as strong and durable as wagon wheels.

Wherever the name Hocking Valley is known, that is sufficient guarantee of the qualities of the Loader, and that in construction, material, and finish it is without a rival. Ask for special circular and price.



Hocking Valley Steel Champion Rake

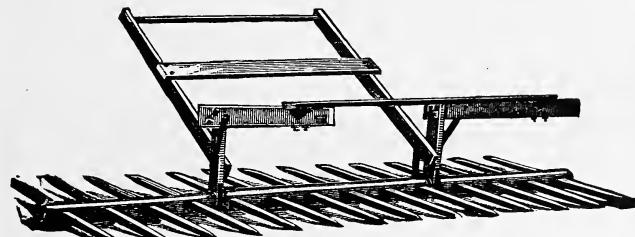
The Hocking Valley Steel Champion Rake has been designed, constructed and finished with a view of making it the best sulky rake offered to the trade.

It is a self-dump Rake in which the labor of discharging, as well as gathering the load, is done by the horse. The shafts can be changed into a pole for two horses easily and quickly. There are no springs of any kind on it to become weak and get out of order. It produces no jar in dumping.

The vibrating cleaner rods lie on top of the windrow, and by their weight keep it compact, and enable the Rake to gather the hay by pushing it along, not rolling it. Thus, when the dump is made, the hay is turned bottom side up and the damp part exposed to the wind and sun.

PRICES

8-foot, with 20 teeth.....	\$35 00
9-foot, with 24 teeth.....	37 00
10-foot, with 26 teeth.....	38 00



The Huber Revolving Hay-Rake

It is the most practical Rake in use, and is made of the best selected hardwood timber thoroughly seasoned. The teeth are square and are framed in the heads perfectly solid, thus giving them more strength and making them less liable to come loose and break, and enabling them to gather the hay better than a round-tooth Rake. Leaves the hay in better shape for pitching and building than any other style of Rake.

PRICES

8-foot, 14 teeth.....	\$13 50
9-foot, 16 teeth.....	14 50

The Standard Hay-Rack

Capacity, 2 tons. (Patented)

With reasonable care will last a lifetime. No cross-pieces above the floor. Wagon can turn short, front wheels turning under the rack. Ladders fold down when not in use, front ladder making a spring seat. Material, clear red elm, securely bolted, $\frac{3}{8}$ -inch steel bolts being used in its construction.

Shipped "knocked down." Can be set up in thirty minutes, the only tool required being a wrench.

16 feet long, 38-inch bolster....\$24 00
16 feet long, 42-inch bolster....25 00

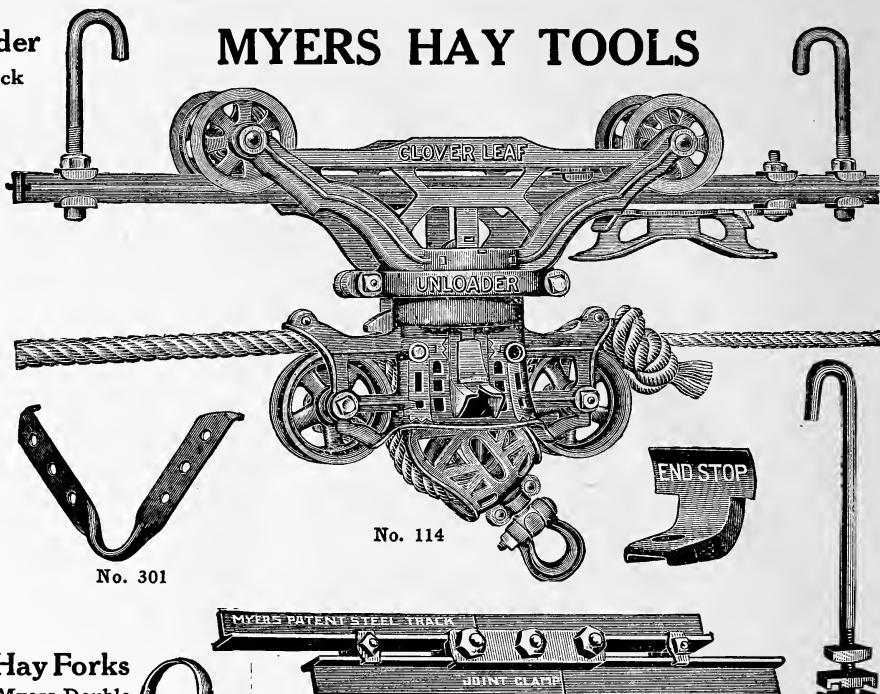
Furnished at the above prices to fit either 38- or 42-inch bolsters. In ordering be careful to state width of bolsters.

Myers Clover Leaf Unloader**Swivel and Reversible 16-inch Truck
for Double Steel Track**

The Myers Clover Leaf Unloader is built of malleable iron throughout. It is heavy and substantially made. Trucks are 16 inches long. Track wheels are large and revolve on $\frac{1}{8}$ -inch turned steel axles. Lock is composed of three parts and has no springs. This Unloader has wide-open mouth to receive fork pulley when swinging at any angle. Rope sheaves have longer hub than other Unloaders. Knocker and end stop furnished with each Unloader.

PRICES

No. 114. Unloader. Complete as described above.....	\$ 8 50
No. 824. Double Steel Track, as illustrated. Per foot.....	25
No. 301. Steel Rafter Brackets, as illustrated. Each.....	07
No. 302. Steel Track Hanging Hooks, as illustrated. Each.....	15
No. 266. $\frac{3}{4}$ -inch Floor Hooks. Each.....	15

**Myers Hay Forks**

No. 268. Myers Double Harpoon Fork is constructed of heavy material. It is well riveted and has 25-inch steel tines, nicely sharpened. \$2.25 each.

No. 773. Nellis Fork is constructed of extra-quality material throughout. This Fork is nicely finished. Point is sharp as shown in illustration. \$4.50 ea.

Myers Pulleys

No. 1120. Has 6-inch wood sheave, 1-inch pin, loose pin, swivel eye. Frame is made in two halves, riveted together. Axle is $1\frac{1}{8}$ inches. 75c. ea.

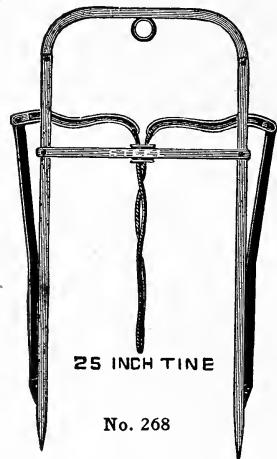
No. 1267. Has cast frame, 6-inch wood sheave, $1\frac{1}{4}$ -inch pin. Neat design. Different from the ordinary plain Pulley. 55 cts. each.

No. 692. All Cast Iron Pulley. Sheave is $5\frac{1}{2}$ inches with solid axle. 55 cts. each.

No. 434. Reed Wood Frame Pulley. Has 1-in. loose pin, self-lubricating wood sheave, with steel hook. 55c. ea.

No. 466. Not illustrated. Same as No. 434, with Swivel Eye. 55c.

No. 1124. Has malleable iron frame extending around the entire surface of the sheave. Frame is made in two separate pieces riveted together at the swivel eye; has malleable iron clevis and steel bolt; has iron sheave. Is especially designed for rough usage. \$1.25 each.



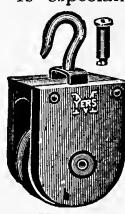
No. 1267. Has cast frame, 6-inch wood sheave, $1\frac{1}{4}$ -inch pin. Neat design. Different from the ordinary plain Pulley. 55 cts. each.

No. 692. All Cast Iron Pulley. Sheave is $5\frac{1}{2}$ inches with solid axle. 55 cts. each.

No. 434. Reed Wood Frame Pulley. Has 1-in. loose pin, self-lubricating wood sheave, with steel hook. 55c. ea.

No. 466. Not illustrated. Same as No. 434, with Swivel Eye. 55c.

No. 1124. Has malleable iron frame extending around the entire surface of the sheave. Frame is made in two separate pieces riveted together at the swivel eye; has malleable iron clevis and steel bolt; has iron sheave. Is especially designed for rough usage. \$1.25 each.



No. 1120

No. 1267

No. 692

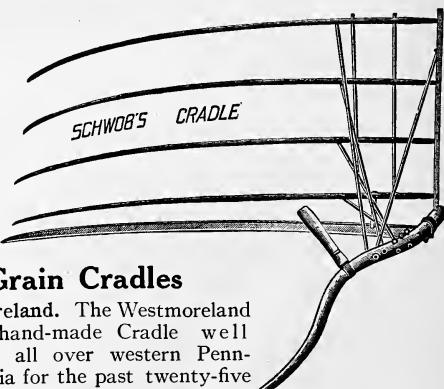
No. 434

Rope

We handle the best grades of Manila and Sisal Rope; especially adapted for hay-fork outfits and other hard work where a strong, serviceable rope is required.

SIZES AND PRICES PER FOOT

	$\frac{1}{4}$ -in.	$\frac{3}{8}$ -in.	$\frac{1}{2}$ -in.	$\frac{5}{8}$ -in.	$\frac{3}{4}$ -in.	$\frac{7}{8}$ -in.	1-in.	
Manila.....	\$0 02	\$0 02	$\frac{1}{2}$	\$0 03	\$0 04	\$0 05	\$0 07	\$0 08
Sisal.....	01	01 $\frac{1}{2}$	02	03	03 $\frac{1}{2}$	05	06	

**Grain Cradles**

Westmoreland. The Westmoreland is a hand-made Cradle well known all over western Pennsylvania for the past twenty-five years. There is none better on the market. \$9.

Schwob Champion. The Schwob Champion is a machine-made Cradle, well known throughout the middle and southern states. Although cheaper than the hand-made Cradle, it does excellent work, and is strong and durable. \$6.

Extra Fingers for the above, hand-made..... \$0 40
Extra Fingers for the above, oil-sprung 20

Ann Arbor

"THE PRESS FOR PROFIT"

Noted for low upkeep

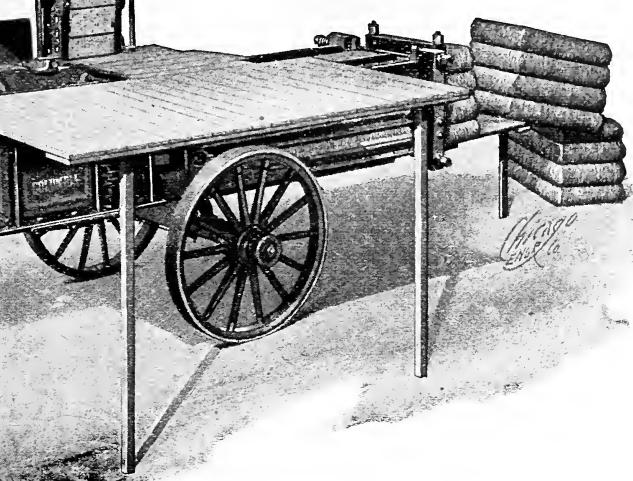


Columbia

THE ALL-ROUND HEAVY DUTY CHAMPION

For Steam or Gasoline Engine, 6 to 15 H. P. Makes 140- to 190-pound bales

In 4 sizes: 14 x 18 in.; 16 x 18 in.; 17 x 22 in.; 18 x 22 in.
Capacity, 30 to 70 tons per day



Ann Arbor Hay-Presses

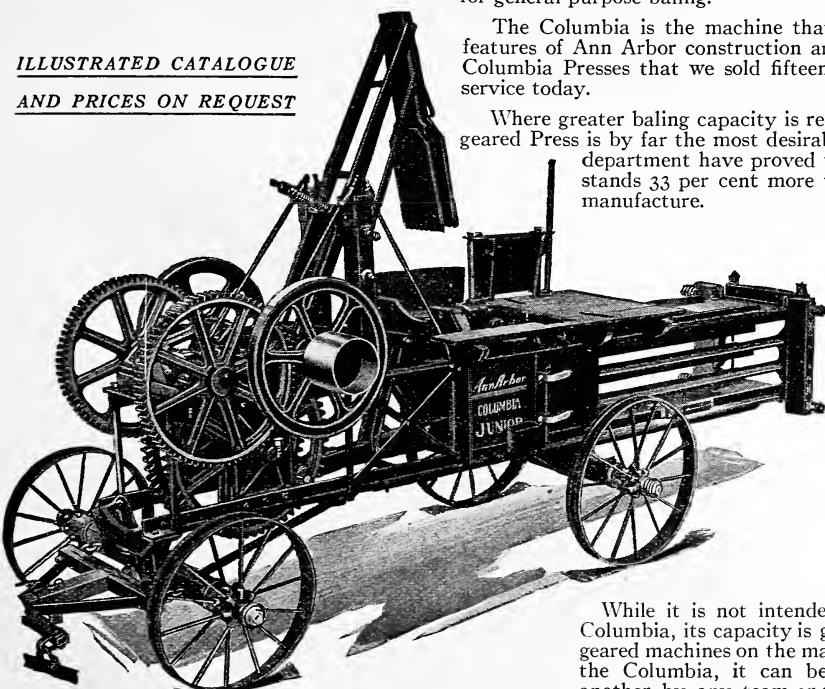
The Ann Arbor Columbia is the original of the Ann Arbor line—the pioneer of all Power Presses.

You can do anything with the Columbia that you would ever ask any Hay-Press to do. It is a double-gearred machine designed for general-purpose baling.

The Columbia is the machine that made our reputation years ago. The best features of Ann Arbor construction are in it. It has always been our leader—the Columbia Presses that we sold fifteen and twenty years ago are still giving good service today.

Where greater baling capacity is required, with weight in the bales, this double-gearred Press is by far the most desirable. Careful tests made by our experimental department have proved that in hard baling the double-gearred Press stands 33 per cent more work than the single-gearred Presses of other manufacture.

ILLUSTRATED CATALOGUE
AND PRICES ON REQUEST



Columbia Junior

For medium heavy baling. Weighs about 1,500 pounds less than the Columbia. In 3 sizes: 14 x 18 in.; 16 x 18 in.; 17 x 22 in. Requires 6 to 10 H. P. Makes bales from 100 to 140 pounds. Capacity, 20 to 40 tons per day.

The Ann Arbor "Columbia Junior" possesses practically all of the desirable features embodied in the Columbia. It is double-gearred throughout, thereby affording the same perfect balance and distribution of power.

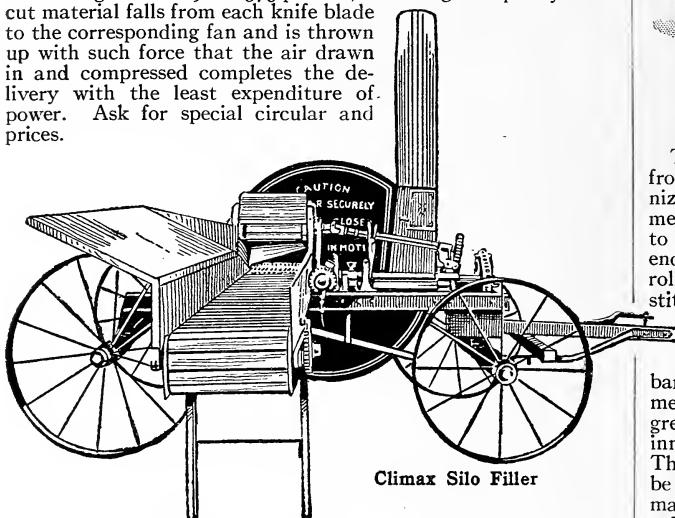
While it is not intended for as heavy and strenuous baling as the Columbia, its capacity is greater than that of the various heavy single-gearred machines on the market. Being somewhat lighter in weight than the Columbia, it can be more easily transported from one job to another by any team or tractor.

Climax Silo Filler

Developed in the early days of the silo, the Climax Ensilage Cutter soon proved the great efficiency of the fly-wheel design. This machine soon proved that knives could be carried on a rapidly revolving wheel that also would carry fans to lift and blow the ensilage into the silo. By performing the cutting and the elevating of ensilage in one operation great speed and great saving of labor, to say nothing of saving of power, were realized.

The Climax is a Pneumatic Ensilage Cutter or Blower. Both the cutting and elevating are done by a large wheel which carries the knives on one side and the elevating fans on the other.

The ease with which such great quantities of ensilage can be placed in the highest silos by our machines is not due alone to the wind force of the blower, as in the cylinder cutters, but principally to the impelling power of the heavy wheel which answers the combined purpose of cutter, blower, and balance wheel. This wheel weighs from 190 to 375 pounds, according to capacity. The cut material falls from each knife blade to the corresponding fan and is thrown up with such force that the air drawn in and compressed completes the delivery with the least expenditure of power. Ask for special circular and prices.



Climax Silo Filler

Farquhar Threshers

The A. B. Farquhar Co. have been manufacturing Threshers for more than sixty years. As a result, practical improvements have been made from time to time and their machines are up to date in every detail.

Farquhar Steam Engines

The Farquhar Traction and Portable Engines and Boilers represent the highest possible efficiency in this class of machinery and can be depended upon, year in and year out, to deliver steady, dependable power at minimum operating expense.

Farquhar Saw Mills

For many years the Farquhar line has represented the last word in "up-to-date" Power Saw-Mills. These Mills are built to stand the strain of constant hard usage and should not be compared with the numerous light outfits sold solely because of their cheap price. Thousands of Farquhar outfits are now in operation all over the country.

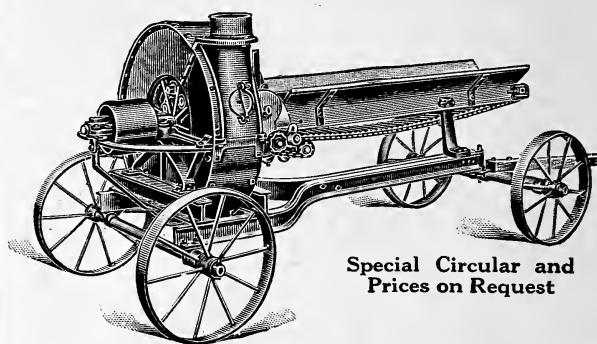
Rosenthal Corn-Huskers

The Rosenthal Corn-Husker had its beginning in 1882. For forty years it has been improved, as new ideas came to the mind of the inventor, until today the machine represents the most efficient type of Husker on the market.

Special catalogue and prices on the above lines will be furnished on request

Hocking Valley Silo Filler and Fodder Cutter

Made with 9-, 11-, 13- and 15-inch throat, Self-feed Table and Silage Deflector, mounted and unmounted



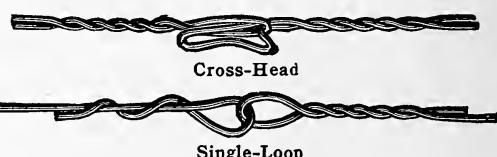
Special Circular and Prices on Request

This Blower is so compact, so simple in construction and so free from machinery and complicated parts that its merits are recognized on sight. Excepting the ground sill it is made entirely of metal. It consists simply of a heavy iron disc or balance wheel to which are attached the knives and fan blades, and these are enclosed in a circular iron drum or case. These with the feed-rollers and main shaft on which the balance wheel revolves, constitute practically the whole machine.

The manner of attaching the knives to the balance wheel calls for special attention. They do not shear, as in other similar cutters, from the inner end toward the outer end of the shear bar. On the contrary, the knives are so set that they first meet the shear bar at its outer end, where the momentum is greatest and where the work is hardest and shear toward the inner end, as the momentum diminishes and the work decreases. The importance of this construction in saving of power cannot be overestimated. We furnish two knives regularly, but four may be used at an extra cost of the two knives.

We call particular attention to the I-beam base, which adds special strength and rigidity to the frame.

Hay Bale Ties



We make a specialty of furnishing Steel Wire Hay Bale Ties for baling hay, straw, waste paper, etc., to suit all the different sizes and styles of balers. We carry in stock at Pittsburgh for quick shipment the leading sizes of cross-head and single-loop ties and can also make prompt shipments direct from factory. Prices will be quoted on request.

Binder Twine

We have always made a specialty of furnishing our customers with high-grade Binder Twine. We will not handle Twine about which there is the least suspicion of shortage in length, poor material, or workmanship. We furnish the following:

Sisal. 500 feet to the pound.

Standard. 500 feet to the pound.

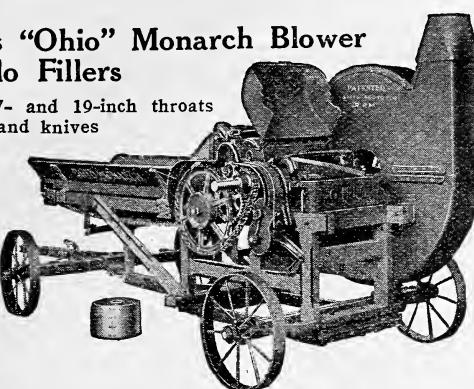
Manila. 600 feet to the pound.

Pure Manila. 650 feet to the pound.

Write for prices specifying quantity wanted

Silver's "Ohio" Monarch Blower Silo Fillers

With 15-, 17- and 19-inch throats
and knives



The three sizes of Silver's "Ohio" Monarch Blower Silo Fillers are equal to any demand that may be made on them for individual silo filling, community or jobbing work. They are built strong of the best of materials for heavy duty and long service. The direct drive construction with pulley, fan, and knives all on one shaft *but all separate* is one of the secrets for the "Ohio's" easy running, large capacity and the extra-fine quality of silage they produce. Before deciding on any silo-filling outfit send for attractive illustrated catalogue showing these machines. Prices quoted on request.

Economy Ensilage Conveyor

Puts ensilage where you want it. Every silo owner needs one.

You will have better ensilage if you use an Economy Conveyor in filling your silo. It assures a better pack. Leaves, moisture, and heavier parts are uniformly mixed, air is excluded and even settling results.

The exclusive construction of the Economy Conveyor makes it almost as flexible as a rubber tube. The flow can therefore be directed to the outer edge of the silo as is desirable to secure even distribution, the pressure always forcing the ensilage toward the center.

The Economy Conveyor consists of a series of 26-gauge galvanized steel conical cylinders, 36 inches long, 10 inches across at the top and 8 inches across at the bottom. These are coupled by short chains on opposite sides. The top section, made of 24-gauge iron, is about 2 feet long, 18 inches across at the top and 9 inches across at bottom. The flaring top is placed close under the end of the hood on the blow-pipe. The other end is controlled at will by the operator, who can place the ensilage wherever desired.

One man and an Economy Conveyor can do the work of three or four and do it better and more quickly. It works automatically—requires only to be guided. It will improve the packing and quality of your ensilage.

This Distributor can be used with any style blower. The sectional construction permits convenient adjustment to the decreasing space of the silo as it fills. The tube is thus kept always at the required length. The chains are steel and the hooks to which the chains fasten are of galvanized iron.

SPECIFICATIONS

6 joints and 1 top section for silos 24 feet high.

8 joints and 1 top section for silos 30 feet high.

10 joints and 1 top section for silos 36 feet high.

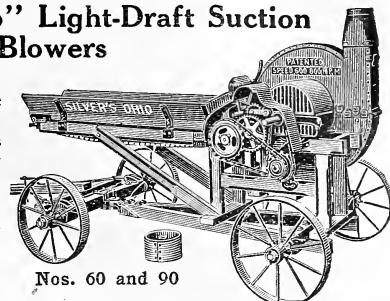
Other heights in proportion

PRICES

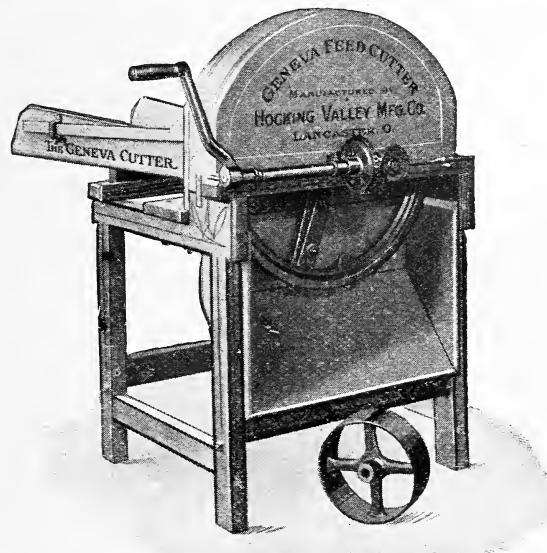
Top Section, with flaring top, each \$2.50
Other Sections, complete, each 1.75

Silver's "Ohio" Light-Draft Suction Blowers

These Light - Draft Suction Blowers are made in two sizes with 11- and 13-inch knives and throats. They were designed for light gas engines of from 6 to 10 horse-power and are especially adapted for individual or community silo filling, using the regular farm help or exchanging labor with neighbors. They are built on the same basic "lawnmower cut," direct drive principle as our famous Ohio Monarchs and are guaranteed to be exactly as specified in every respect. Send for complete illustrated catalogue showing these machines in actual colors and giving complete data.



Nos. 60 and 90



The Geneva Feed-Cutter

The Geneva Feed-Cutter has been added to our already quite extensive line of feed-cutting machines for the purpose of accommodating those who prefer one with the knives on the balance wheel. The knives are straight and flat, and of the best quality, easily adjustable to the shear bar, and can be removed, ground and replaced with the utmost ease. It has our patent triangular frame, giving it a firm foundation on any surface.

No. 6. Has two 9-inch knives and is intended for hand use only. It cuts five different lengths, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, and $1\frac{1}{4}$ inches, and the change can be made in a moment. \$40; Splitters \$4.50 extra.

No. 8. Has two 10-inch knives and is also intended for hand use only. It cuts five different lengths, same as No. 6. It is a very desirable hand machine. \$43; Splitters \$5 extra.

No. 10. Has two 10-inch knives and is intended for both hand and power. It cuts five different lengths, same as No. 6 and No. 8. The gearing is covered to prevent accidents, and is provided with a lever, which not only throws it in and out of gear but reverses the motion of the rollers, when desired. With crank attachment and pulley, \$50; Splitters \$5 extra.

No. 12. Has two 13-inch knives and is intended for both hand and power. It cuts six different lengths, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{8}$, 1, and $1\frac{1}{4}$ inches. It has its gearing protected, and also has a lever for controlling the rollers, by means of which they can be stopped, or made to be revolved forward or backward at will. With crank attachment and pulley, \$60; Splitters \$6 extra.

The "Ohio" No. 8½ Feed-Cutter

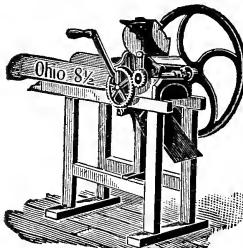
The No. 8½ is an excellent Cutter for anyone needing a small, easy-running machine for cutting all kinds of dry or green food for one or a few head of stock. It is well built and reasonably priced. The feed box is 38 inches long and has 25-inch diameter pulley. The framework is of good hardwood, mortised, tenoned, and pinned. Has high carbon steel knives, mounted on knife heads with sliding block for quick, accurate adjustment. The cutter bar is chilled iron and the patented feeding gears and rolls work automatically whether one stalk or an armful is being fed.

Capacity. Cuts one bushel of hay in thirty to forty seconds.

Length of Cut. Cuts $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ -, and 1-inch lengths with two knives or double these lengths with one knife.

Pulley for Power. Choice of 8- or 10 x 3-inch pulley can be supplied.

Weight, 175 pounds. With 2 knives, \$40; Pulley \$2 extra. Other sizes quoted on request.

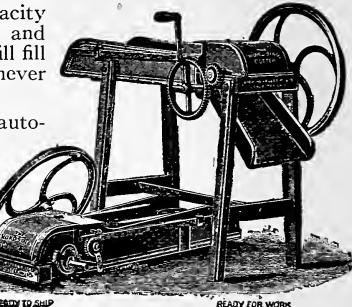


The Kokosing Feed-Cutter

It has been designed and constructed to meet a general and long-felt want for a hand machine that is cheap, strong, durable, well finished, and at the same time one that has good capacity and does its work rapidly and with ease. A Cutter that will fill all these requirements has never been offered before.

It has an 11-inch knife, an automatic feed, and can be changed in a moment to cut various lengths.

It is made entirely of hard wood, finished in the natural color, is as handsome as a piece of furniture and is the most durable Cutter of the kind ever made. All things considered, it is the cheapest hand Feed-Cutter ever offered to the trade. \$29; with belt wheel, \$31.25.



Thompson's Banner Root-Cutters

FOR CUTTING ALL KINDS OF ROOTS AND VEGETABLES FOR STOCK FEEDERS



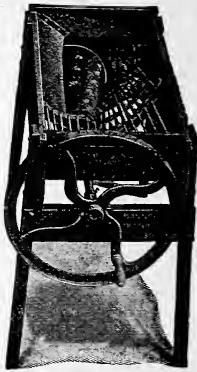
No. 20



No. 16



No. 10



No. 30

No. 20. The popular Cutter for all ordinary requirements where hand power is used. Capacity 30 to 50 bushels per hour; weight, about 125 pounds. \$18.50; extra knives \$2.50 per set.

No. 16 is supplied with balance wheel, pulley, and crank, so it can be used by power or hand as desired. It is considerably larger than the No. 20; weight about 150 pounds. Complete, pulley and crank, \$25; extra knives \$2.50 per set.

No. 10. Exclusively for power, capacity 4 to 6 bushels per minute. Just the machine for large feeders who drive machinery by power. This is a large, strong machine; weight about 300 lbs. Complete, for power use, \$35; extra knives \$3.25 per set.

No. 30. New Banner Root Cutter. Turns easily by hand. At 60 revolutions, the knives hit and cut the roots 1,800 times, the result being at a low estimate $1\frac{1}{2}$ to 2 bushels per minute of cut feed. Cut feed left in long, half-round slices that has made the Banner Root-Cutter a popular machine for this work for twenty years. A glance at the cut of this new Root-Cutter shows the large capacity of the hopper—39 inches long, 18 inches wide, and 18 inches deep at the lower or cutting end; the long drum with thirty knives attached; the gravity slant of the inside of hopper; the open bottom with iron rods and open cutting grate to allow dirt to escape without mixing with cut feed, and the fact that the largest mangels or sugar beets, turnips, potatoes, carrots, and any other roots that are fed to stock can all be handled with this machine and left in the best possible shape for feeding at so fast a rate that the results are surprising. For best results this machine should be run from 60 to 75 revolutions. It works best if run slow. Weight 175 to 180 pounds. Complete, with 10 extra knives and pulley, \$35; knives, per set of 30, \$3.25.

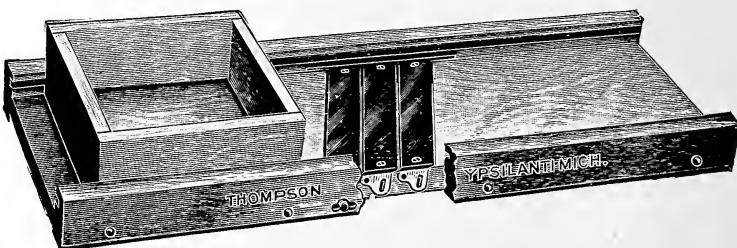
For description and prices of "Banner Root-Cutters for Poultry" see page 159

Ypsilanti Kraut Cutters

The simplest, cleanest, and most perfect Cutters on the market. Made of extra-quality sugar maple. Best quality woodwork, red enamel, heavy knives, perfect construction. Each knife adjusted separately.

Prices Postpaid

No. 9B. 2 knives; 9 x 26 inches.....	\$1 75	\$2 00
No. 55. 3 knives; 9 x 26 inches	2 25	2 50
No. 65. 3 knives; 11 x 30 inches.....	3 00	3 25
No. 80. 4 knives; 13½ x 40 inches...	6 00	6 25



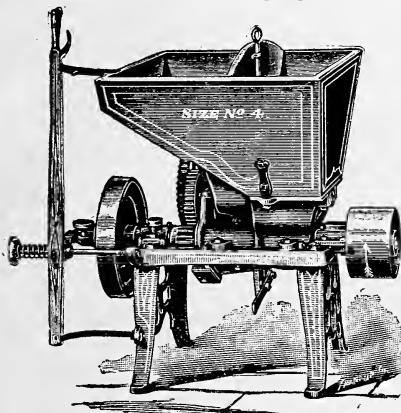
BOWSHER GRINDING MILLS

WRITE FOR SPECIAL CATALOGUE

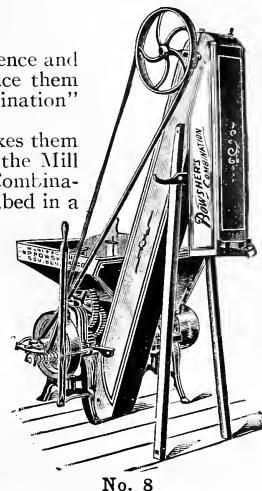
These machines represent the highest achievement in practical feed mill construction. Their convenience and simplicity of operation, wide range of usefulness, durability of construction, and beauty of design place them pre-eminently in a class by themselves. Nothing has been spared in the construction of Bowsher's "Combination" mills to make them thoroughly efficient "general purpose" grinders.

Aside from the high class of workmanship characterized throughout the Mills, the feature that makes them unique among grinders is the peculiar type of cone-shaped grinding plates employed, which secure for the Mill many advantages in the way of light running qualities, large capacity, and economy of operation. The "Combination" Mills are manufactured in eleven sizes, for use with from 2 to 25 horse-power, and are fully described in a special circular which will be mailed on request. Suitable "sacking" or "wagon-box" elevators furnished for all sizes when desired.

Size No. 8. The No. 8, shown here with elevator, incorporates all the advantages peculiar to the "Combination" line: The cone-shaped grinders, which present a larger grinding surface close to the center of the shaft and run empty without injuring themselves; the wooden relief lever, by which the grinders may be instantly thrown wide apart to prevent choke-up or eliminate foreign substance; perfect lubrication of all bearings; positive feed for ear corn; and the divided hopper which handles ear corn, with or without the shuck, and any kind of small grain at the same time, crushing, grinding and mixing the two together perfectly in any proportion desired. Power required, 10 to 15 horse-power. Without elevator, \$135; with 4-in. elevator, \$169.



No. 8



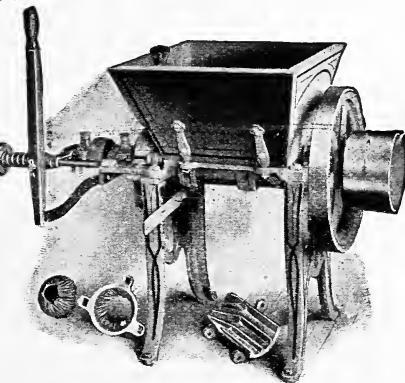
No. 8

Size No. 4. This Mill is constructed on practically the same principle as the No. 8, the size representing the chief difference. It is equipped with the cone-shaped grinders, the wooden relief lever, has positive feed for ear corn, divided hopper, etc. This machine will handle successfully ear corn, with or without the shuck, and all kinds of small grain. Has perfect regulation for coarse or fine grinding, and the burs may be allowed to run empty without injury. Power required, 6 to 10 horse-power. Without elevator, \$90; with 4-in. elevator, \$122.

Size No. 0. This is the smallest Mill in the "Combination" line, but presents a high type of workmanship and construction rarely to be found in Mills suitable for very small powers. It will feed itself on ear corn and handle any kind of small grain satisfactorily. The hopper is all in one, but is sufficiently wide and long

that ear corn may be shoveled into it. It is equipped with the cone-shaped grinders, the wooden relief lever, and many other advantages of the larger sizes. Power required, 2 to 4 horse-power. Without elevator, \$38; with 3-in. short elevator, \$54.

For description and prices of smaller Mills, see pages 160 and 161



No. 0

Silver Light-Running Feed-Grinders and Mills

The keen-cutting, self-sharpening burs are perfectly aligned—grind all kinds of grain to any fineness desired

The manufacturers of Silver Grinders have concentrated on three sizes of bur mills, and one size of roll mill. This range of sizes and styles for from 2 to 15 horse-power. Gas Engines will suit any farmer's particular requirements. Concentrating on fewer sizes enables the manufacturers to produce these high-quality Silver Mills in greater quantities—resulting in lower manufacturing and selling costs.

The Silver No. 7 Grinder is recommended where a very light power mill is required for grinding shelled corn and other grain. Price, \$41.

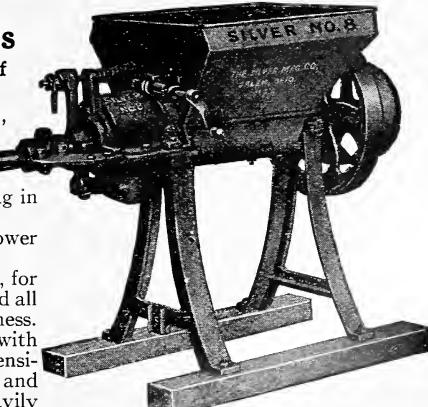
The Silver No. 8 Grinder is a much heavier Grinder throughout, for grinding ear corn, shelled corn, and all kinds of grain to any desired fineness. It is light running and is equipped with spring safety device, bur release, sensitive feed control, cob-breaker and comb-bar. The bearings are all heavily babbittted and provided with oil reservoir and covers—including ring oiler device—and is a very quiet and easy running Grinder. Price \$47, with elevator \$72.

The Silver No. 9 Grinder is a larger and heavier all-purpose Grinder with large capacity. Has ball-bearing end thrust and all the commendable features found on the No. 8, and is somewhat similar in construction. In addition, it has a compartment hopper for grinding different kinds of grain at once, and is supplied with agitator. Price \$70, with elevator \$95.

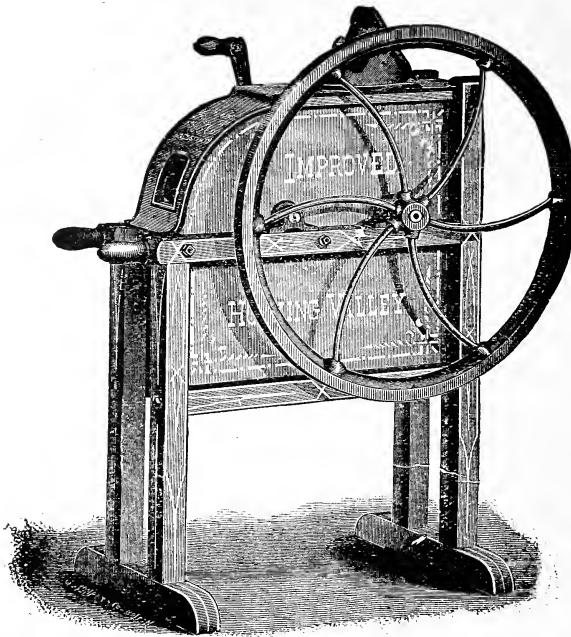
Capacities of the Nos. 7, 8 and 9 Grinders are 3 to 6 bushels per hour PER HORSE-POWER SUPPLIED. Capacity is governed somewhat by speed of machine, condition and kind of grain, and desired fineness of product.



This cut shows No. 9 Silver Grinder with sacking elevator. We can furnish Sacking or Wagon-Box Elevator for Nos. 8 and 9 Bur Mills. See prices on same under specification. (Descriptive printed matter on Nos. 10 Twin Roll Mill sent on application.)



Ask for special catalogue



Hocking Valley Corn Sheller ONE-HOLE SHELLER

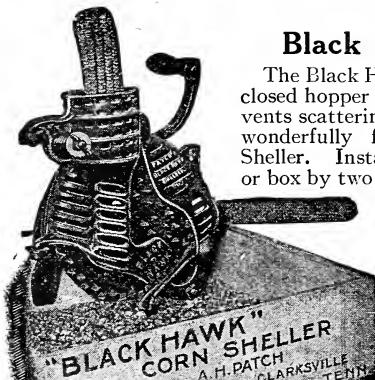
The Hocking Valley One-Hole Sheller is the standard Sheller with which all others are compared. It fully deserves all its popularity. It is carefully made of the best material that can be gotten, and is always perfectly satisfactory in its working. It is furnished either with or without fan, feed table, and pulley, and has a capacity of from 20 to 25 bushels an hour.

PRICES

With fan \$18 00 | Feed-table, extra \$1 25
Without fan 16 00 | Belt-wheel, extra 1 70

Black Hawk Sheller

The Black Hawk Corn Sheller has enclosed hopper and separator. This prevents scattering of the shelled corn. A wonderfully fast and easy running Sheller. Instantly fastened to barrel or box by two large strong clamps with wing nuts. \$2.75.



any other Sheller. Clamps on barrel or tub as well as on box. Requires no wrench. Tension directly on cob, not on hopper, which makes Sheller run very easy, no force being required to expand a hopper. \$2.75.

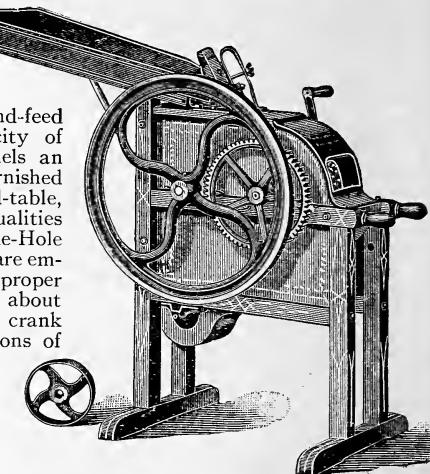
Do not overlook the section of this catalogue devoted to Poultry Supplies, pages 148 to 188.



Red Chief Sheller

Hocking Valley Two-Hole Sheller

The Hocking Valley Two-Hole Sheller is intended to be used either by hand or with power. It is a hand-feed Sheller with a capacity of about 35 to 40 bushels an hour, and is always furnished with crank, fan, feed-table, and pulley. All the qualities which make our One-Hole Sheller such a favorite are embodied in it. The proper speed of the Sheller is about 100 revolutions of the crank shaft, or 300 revolutions of the balance wheel shaft a minute. As ordinarily sent out, it is furnished with an 8-inch pulley, and both shafts are extended.



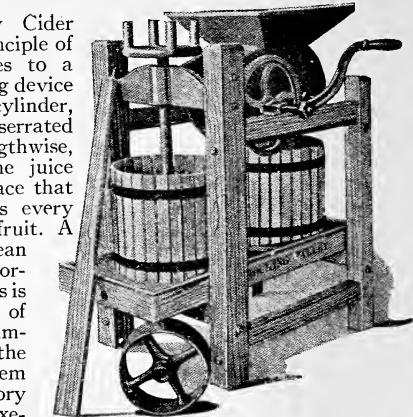
With crank, belt wheel, fan and feed table, \$37.

Hocking Valley Cider Mills

In Hocking Valley Cider Mills we adapt the principle of large hydraulic presses to a hand mill. The grinding device consists of a hardwood cylinder, revolving rapidly, with serrated steel knives running lengthwise, which break down the juice cells and make a pomace that yields under the press every particle of juice in the fruit. A quart of water will clean it after using. An important feature of the Mills is the absence of metal of any kind to rust and impair the quality of the cider. We guarantee them to be entirely satisfactory in every respect, in execution, ease of operation, capacity, in durability and finish. They are made in the following sizes:

Bantam Mill. 1 tub. \$23 00
Junior Mill. 2 tubs. 31 00
Medium Mill. 2 tubs. 40 00
Senior Mill. 2 tubs. \$52 00
Power Pulley, extra. 2 50

Power pulley can be furnished for all Mills except the Bantam.



Red Chief Sheller

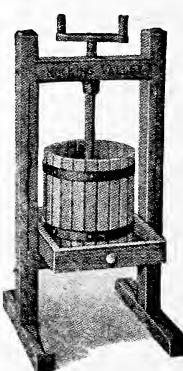
Has patent oval-shaped teeth, shelling corn without cracking the grains. Shells clean, taking off less chaff than

is constructed of strictly high-grade hardwood lumber, is thoroughly well made and handsomely finished.

No. 1. This has a 1-inch screw, and the crate or tub is 10½ inches high and 8½ inches in diameter. Its capacity of course is limited, but evidently sufficient to meet the wants of a good many, as we have a generous trade on it. \$9.

No. 2. This size has a 1¼-inch screw, and the crate or tub is 12 inches high and 10½ inches in diameter. This is the size preferred for general family use and most in demand. \$12.

No. 3. This size has a 1½-inch screw, and the crate or tub is 15 inches high and 15½ inches in diameter. It is used where greater capacity is wanted. \$13.50.



The Renfrew Truck Scale



Will weigh a 1-pound chicken or a 2,000-pound bull
Better and cheaper than platform scales

The Renfrew Portable Weighing-Machine consists of a sturdy two-wheeled truck into which is built a heavy-duty scale, having a weighing capacity from 1 to 2,000 pounds. The Renfrew is guaranteed to be the equal in capacity and accuracy of any farm Scale made, regardless of price.

Nearly everything that leaves your farm to be sold is paid for on the basis of weight. The Renfrew allows you to do your own weighing before you sell, thus assuring maximum profits.

Most of the things you buy in town are bought by weight. Check up your purchases with the Renfrew when you get home and make sure you got all that was coming to you.

The Renfrew tells you when your stock is gaining or losing in weight on certain feeding rations.

The Renfrew tells you how much milk each cow in your herd is producing—which cows are the producers and which are merely boarders.

It is a mistake to guess at weights—it means loss and leakage. A Renfrew Portable Weighing Machine is a profit-paying proposition on any farm. It is so made that it can be used as a truck for carrying heavy loads, and at the same time weighing any load up to 2,000 pounds.

The Renfrew thus does double duty—it carries the load and weighs it. It shows the exact weight of every article you buy or sell. It will save its cost in one month. Can be used for weighing live-stock or the smallest article you need to weigh.

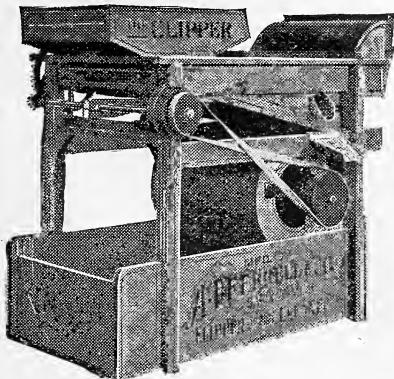
When the Renfrew is not in use, stand it up against the wall in any out-of-the-way corner. No valuable floor space is occupied as is the case with the ordinary platform Scale.

Almost all platform scales require a perfectly level floor in order to record accurate weights. The Renfrew is a self-adjusting Scale—weighs accurately anywhere—a feature that makes it the ideal farm Scale.

Sold in large numbers to farmers in many countries, who consider it a most practical machine. It is the only machine of its kind on the market. It is shipped complete with weights ready for instant service. \$53.

ASK FOR DESCRIPTIVE CIRCULAR

Clipper Grain and Seed Cleaner



The No. 1-B Clipper Seed Cleaner

The Clipper has no worthy competitor. It is used by seedsmen almost exclusively. No other Cleaner cleans so clean—none other sells so cheap. The Clipper is well made, nicely finished, light running. It will last a lifetime and earn its cost every year it is used on a well conducted farm.

The Clipper screen outfit is very complete for the work required and contains screens for wheat, oats, barley, rye, red and alsike clovers, alfalfa, sweet clover, timothy, millet, flax, peas, beans, cowpeas, soy beans, grading seed corn, cleaning clover containing buckhorn, plantain or ripple, cleaning timothy seed containing pepper grass and sorrel; also cane seed, milo maize, kaffir corn and separating corn from oats.

The vertical air blast of the Clipper is a feature that no other Cleaner has, and it makes possible the most difficult separations that can be made in no other way. For instance, in cleaning seed grain, if the belt is properly adjusted on the pulleys, so as to get the correct speed of the fan and if the turning is regular, you can remove the light grains from the heavy, to the extent that the weight of the grain being cleaned can be raised from 3 to 5 pounds per bushel. Clipper Cleaners are used by the agricultural colleges, experiment stations, seed-breeders, and seedsmen generally in the United States, Canada, Europe, Australia, South America, and New Zealand, in fact, all over the world.

No. 1-B Clipper is a farm-size hand-mill that will clean 20 bushels of seed wheat per hour, or 10 bushels of clover or timothy seed per hour. Dimensions: Length, 4 feet 8 inches; width, 2 feet 2 inches; height, 3 feet 8 inches; weight, crated, 185 pounds.

Twelve screens, 19 inches wide and 22 1/4 inches long, go with the No. 1-B Mill, an outfit suitable for cleaning seed wheat, rye, oats, corn, barley, peas, beans, clover, timothy seed, other grass seed, garden and vegetable seeds.

Plain directions for separating go with each Mill. These are so easily understood that anyone can learn in a few minutes how to make the most delicate separations. \$40.

The No. 2-B Clipper does exactly the same work as the No. 1-B. Its capacity per hour is 25 bushels grain and 15 bushels of grass seed. The screens (12 in number) are 6 inches wider than the No. 1-B screens. Dimensions of No. 2-B are 4 feet 8 inches long, 2 feet 8 inches wide, 3 feet 8 inches high; crated weight, 210 pounds. No. 2-B can be run easily by hand for cleaning grass seed, but for cleaning grain some kind of power should be applied—1/2 horsepower is sufficient. \$48.

CLEANING SEED GRAIN. There is no more important duty associated with farm work and farm management than the securing of perfectly pure seed—seed all of its own kind, that is free from foreign substance, dirt, weed seed, other grain seeds and all imperfections. There is no occasion in these times of seed-cleaners and seed-graders to sow, in seeding for any crop, anything but the best quality of seed. Every farm should be supplied with an up-to-date Cleaner and Grader. There is no greater money-saver on the farm.

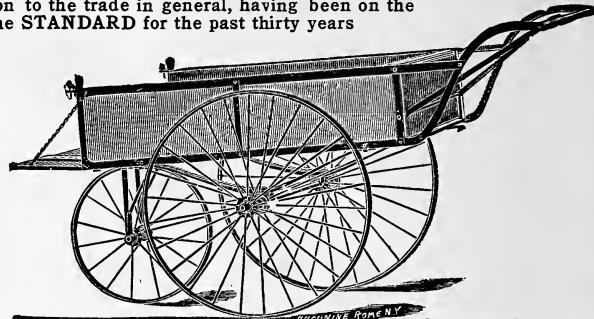
The Monitor Hand Cart

Uses. The uses to which these Carts are adapted are unlimited. They will pay for themselves in a short time in any manufacturing or mercantile business, and are indispensable to grocers, bakers, laundries, farmers, dairymen, gardeners, and for general family use. Where the Monitor has once been used there is no more use for the wheelbarrow or any other cart.

Construction. The frames of bodies are made of special carbon steel, riveted together with best Norway rivets. It is light and very strong, with durable first quality basswood box inside, and has fine oil tempered half elliptical springs (two- and three-leaf as required), and the wheels nicely painted.

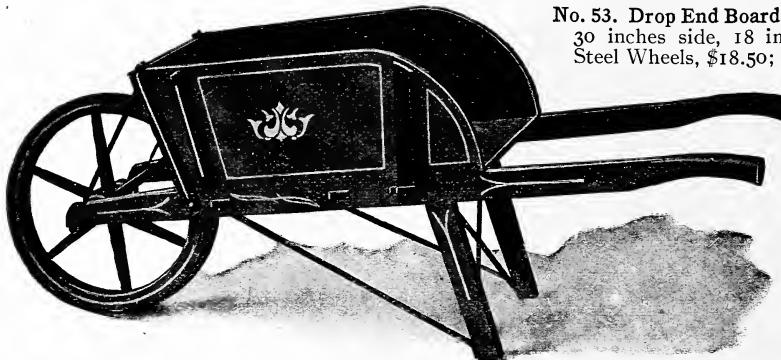
No. 333. Drop End Board. Size inside of body, 39 x 24 inches; depth 10 inches; wheels 26 inches side, 14 inches front. Capacity, 350 pounds. Price, with 3 Steel Wheels, \$17; with Wood Wheels, \$21.

Needs no introduction to the trade in general, having been on the market and the STANDARD for the past thirty years



ROGUNINE ROMNEY

No. 53. Drop End Board. Size of body, 40 x 26 inches; depth, 10 inches; wheels 30 inches side, 18 inches front. Capacity, 400 pounds. Price, with 3 Steel Wheels, \$18.50; with Wood Wheels, \$22.50.



Pittsburgh Garden Barrows

These Barrows are made of thoroughly seasoned wood, have double frames, firmly bolted together and iron braced. They are neatly finished and very strong.

No. 1. Large. Body 30 x 24 in.; sideboards 12 x 30 in.; wheels 1 3/4 x 20 in. \$9.50.

No. 2. Medium. Body 28 x 20 in.; sideboards 12 x 28 in.; wheels 1 3/4 x 20 in. \$7.75.

No. 3. Small. Body 28 x 19 in.; sideboards 12 x 28 in.; wheels 1 3/4 x 20 in. \$7.50.

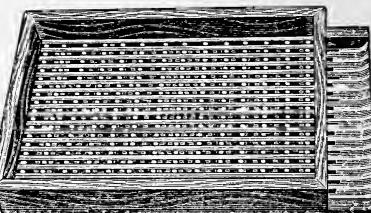
No. 4. Boys'. Body 22 x 18 in.; sideboards 9 x 18 in.; wheels 1 1/2 x 15 1/2 in. \$6.

Perfection Corn-Grader

A seed Corn-Grader has become a necessity in getting a uniform stand of corn. No planter will drop uniformly unless the seed is graded. Graded seed insures perfect dropping, stronger plants and increases the yield 5 to 15 bushels per acre.

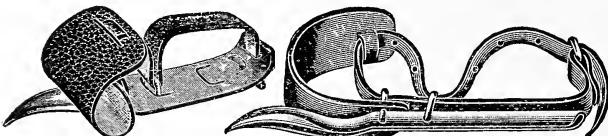
There are four grades of corn on every ear. (1) The small kernels; (2) the large, odd-shaped kernels; (3) the broad kernels too thin for good seed; (4) the even-sized perfect kernels.

This Grader sorts them out in one simple operation. It has a special lower screen construction by which it gets four grades of corn. It has a guard on the lower screen to prevent the spilling of the corn while grading, and to enable all of the screen to act on the corn at once, thus making rapid work.



Capacity: 6 to 10 bushels per hour.
Size 12 x 19 inches
Price, \$1.50; postpaid, \$1.65

Husking Pins



Heavy Leather Shield

No. 200. Grain Leather. Price 25c.; postpaid, 30c.

Round Wire Shape Large Heavy Shield

No. 202. Grain Leather. Price, 25c.; postpaid, 30c.

Binder Twine

We have always made a specialty of furnishing our customers with high-grade Binder Twine. We will not handle Twine about which there is the least suspicion of shortage in length, poor material, or workmanship. We furnish the following.

Sisal. 500 feet to the pound.

Standard. 500 feet to the pound.

Manila. 600 feet to the pound.

Pure Manila. 650 feet to the pound.

Write for prices specifying quantity wanted.

Speedy Stitcher

A PERFECT DEVICE FOR SEWING ANY HEAVY MATERIAL



It is so simple in construction that anyone can use it. In the hands of the unskilled man as well as the mechanic the work is neat, strong and easily done. It mends harness, shoes, and everything made of leather, and sews awnings, tents, and any heavy material. There is practically no limit to its usefulness.

A FULL EQUIPMENT

The regular equipment of every Speedy Stitcher comprises a set of diamond pointed, grooved needles, one of which is our special invention for tapping shoes, and a large bobbin from which the thread feeds. Both bobbin and needles are out of the way, being enclosed in the handle, but all are easily accessible.

Price, 75 cts.; postpaid, 80 cts.

Do not overlook our list of Farm, Garden, and Poultry Books on pages 187 and 188

ROOFING AND PAINT

Everlasting "Rubber" Roofing

Is a strong, pliable fabric made by thoroughly saturating the best grade of roofing-felt with a high grade waterproofing composition, and it is then heavily coated on both sides so that it will resist not only the elements which attack a roof from its upper side, but will also prevent deterioration from the under side.

IN ROLLS 36 INCHES WIDE

2-ply, weight about 45 lbs., per square.....	\$3 00
3-ply, weight about 55 lbs., per square.....	3 50

Nails and cement for laps included in above prices, and packed in center of each roll.

Panamoid (Duplex Rubber) Roofing

IN ROLLS 36 INCHES WIDE

Smooth on one side, sanded on the other side.

1-ply, weight about 35 lbs., per square.....	\$2 00
2-ply, weight about 45 lbs., per square.....	2 25
3-ply, weight about 55 lbs., per square.....	2 75

Nails and cement for laps included in above prices, and packed in center of each roll.

Tarred Felt or Sheathing

Meets every requirement for an air-tight, waterproof sheathing for siding, for lining under roofs and floors, and for every other purpose which demands a durable sheathing.

In rolls containing 400 sq. ft., 32 in. wide, per roll..... \$2 50

Asbestfalt

Reg. U.S. PATENT Off.

Roof Coating

makes roofs water-tight and weather-proof—seals all flashings, open seams, joints, nail holes, cracks, etc., making one leakproof surface. An elastic composition which expands and contracts with the weather.

Asbestfalt roof coating has proved itself equally good for all types of roof, whether tin, gravel, tar-paper, felt or composition, and comes to you fully prepared for immediate use. Just as simple to apply as ordinary paint. 3 to 4 gallons cover 100 square feet.

5-gal. can.....	\$8 00	35-gal. bbl.....	\$49 00
10-gal. can.....	15 00	55-gal. bbl.....	70 00

Robertson Process Rubber Coat

A quick-setting, permanent, preservative covering that keeps new roofs new and is valuable in repairing old roofs of every description. It forms a smooth, glossy, tough, defensive sheet, rubber-like in its pliability, and absolutely and permanently water-proof. It is 99.9 per cent pure asphalt, does not contain any coal-tar products. It will withstand extremes of temperature and it is the best possible roof coating regardless of price.

	Black	Red
1-gal. can.....	\$1 75	\$2 00
5-gal. can.....	7 50	9 00

Special Prices on Larger Quantities Quoted on Request.

PREVENTION versus CURE

"An ounce of prevention is worth a pound of cure" applies to poultry diseases.

A liberal use of Carbola and "B-K" will keep away the lice and mites, as well as contagious diseases. See pages 141 and 186.

Carbolineum

Preserves wood everywhere against rot and decay and adds at least 100 per cent to the life of fence-posts, poles, sills, floors, bridge timbers, porches, wood imbedded in concrete, or ground.

As an exterior and interior coating for wood in silos, ice-houses, root-cellars, water-tanks, flumes, stable floors and wherever exposed to moisture, it is unsurpassed.

Carbolineum as a stain for shingle roofs, buildings, bungalows, barns, stables, granaries, wind-mills, towers, etc., combines color effect with wood preservation.

The nut-brown stain is extremely well adapted for any buildings, perfectly harmonizing with the surroundings and giving a rustic effect, especially if trimmed off with a white or cream-colored paint for cornices, cupolas, eaves, window- and door-frames.

COVERING CAPACITY. First Coat: 350 square feet per gallon on dressed lumber. 250 square feet per gallon on rough lumber. 100 square feet per gallon on shingles.

Second coat only requires one-third or one-fourth the quantity for first coat.

Kills chicken-mites in poultry-houses. Apply once a year.

GUARANTEE. We guarantee that one thorough application of Carbolineum either by brush or sprayer, to the interior walls, dropping boards, roosts, etc., of such buildings, after a previous cleaning and no matter whether they are of wood, tar paper or plaster, will exterminate mites in same for a whole year.

PRICES

Gal. can, \$1.75;	5-gal. cans, \$1.40 per gal.;	10-gal. cans, \$1.25 per gal.;
30- and 35-gal. drums, \$1.05 per gal.;	55-gal. drums \$1 per gal.;	55-gal. wooden bbls. 90 cts. per gal.

Atlasting Ready Mixed Paint

For Tin, Iron, and Steel Roofs, Fences and Paper Roofs. Atlasting Black Paint and a patch of muslin or canton flannel will stop bad leaks in roofs, gutters, etc. Atlasting Red Paint contains oxide of iron and linseed oil and is an excellent paint for all metal surfaces. It does not prevent solder from adhering.

	Black	Red
1-gal. can.....	\$1 50	\$2 75
5-gal. kit.....	6 00	12 00
10-gal. kit.....	10 00	22 00
1/2-bbl. (30 gals.).....	21 00	56 00
Barrel (50 gals.).....	31 00	85 00

Fairbanks-Morse Type "Z" Engines

EQUIPPED WITH BOSCH MAGNETO
OPERATES ON KEROSENE OR GASOLINE

MORE THAN RATED POWER—A REMARKABLE ENGINE

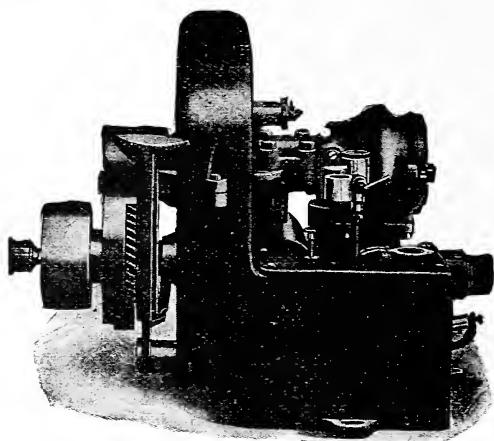
1. Throttling Governor	4. Removable Bushings in Bearings
2. Bosch High-Tension Magneto	5. Close Speed Regulation
3. Speed Controller	6. Suction Fuel Feed

THE FAIRBANKS-MORSE "Z" ENGINE DOMINATES THE FARM
ENGINE FIELD

	Shipping weight pounds	Price
1½ Horse-power "Z" with Bosch Magneto.....	265	\$70 00
3 Horse-power "Z" with Bosch Magneto.....	470	106 00
6 Horse-power "Z" with Bosch Magneto.....	810	170 00
10 Horse-power "Hopper Cooled" with Bosch Magneto.....	2035	370 00
10 Horse-power "Closed Cylinder" with Bosch Magneto.....	1900	340 00
15 Horse-power "Closed Cylinder" with Bosch Magneto.....	2200	425 00
20 Horse-power "Closed Cylinder" with Bosch Magneto.....	3400	700 00
No. 11 Belt-Driven Pump Jack.....	85	11 00
No. 1 Pump Jack.....	108	20 00
No. 2 Pump Jack.....	182	32 50
Four-wheel Truck for 1½ Horse power Engine.....	63	9 00
Four-wheel Truck for 3 Horse-power Engine.....	75	11 00
Four-wheel Truck for 6 Horse-power Engine.....	150	17 00
Horse Truck for 6 Horse-power Engine.....	615	60 00
Brake for Horse Truck.....		10 00
10 Horse-power Portable with Bosch Magneto.....	2350	475 00
15 Horse-power Portable with Bosch Magneto.....	3150	615 00

F. O. B. Pittsburgh, Pa.

Write for Special Catalogue on Fairbanks-Morse Engines



Hafa-Hors Engine

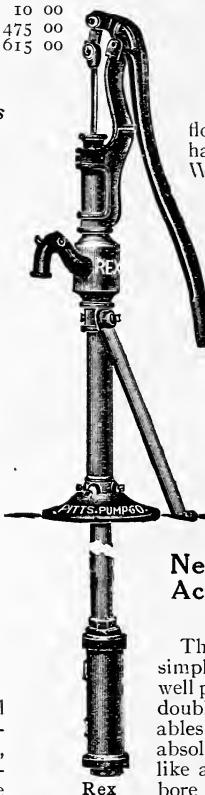
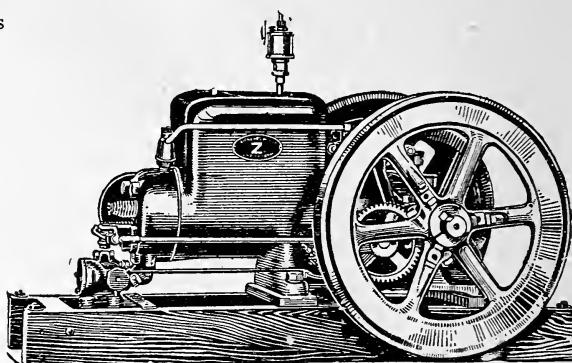
FOR THE LITTLE JOBS

The Hafa-Hors Engine delivers half a horse-power at normal speed. It is just the right size and power for running cream separators, washing machines, churning, ice cream freezers, grindstones, pumps, water-supply systems, sprayers, bone-grinders, corn-shellers, fanning mills, and all the little jobs at the house or the barn.

It weighs only 62 pounds, and being so handy and so light in weight, the Hafa-Hors Engine is really a woman's Engine, although it does all the little jobs for the men, too. Easy to move around the house or barn, or to attach to any special machinery as a portable power drive.

It costs less than 3 cents an hour to run. The speed is adjusted by the thumbscrew while running, to suit the requirements of any job. All moving parts safely enclosed, so there is no danger whatever to anyone. It is convenient, safe, and reliable.

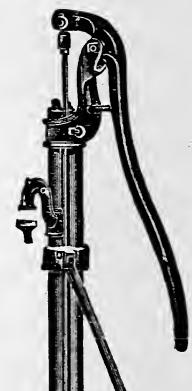
The automobile starter makes the Hafa-Hors Engine practically as convenient as an electric motor. It is always ready to run. Just step on the pedal and it starts instantly. Could anything be simpler. It is convenient, safe and reliable. Ask for special circular. \$50.

Iron Pumps
Rex Deep-Well Lift Pump

This is our new pattern anti-freezing, constant-flowing Deep-Well Pump, fitted with reversible handle and improved compound handle rest. While the Pump is designed for deep wells, yet it can be used in cisterns or wells as deep as 150 feet. Furnished with either 2½- or 3 x 10-inch cylinders at the following prices:

With iron cylinder.....	\$10 00
With brass-lined cylinder.....	12 00
With brass-body cylinder.....	14 25

If wanted complete with 1¼-inch galvanized pipe and ¾-inch galvanized steel rod add to above prices 28 cents per foot for depth of well.

New Fountain Double
Acting Force and Lift
Pump

The New Fountain is the simplest and most efficient deep-well pump on the market. It has a double air-chamber, which enables the pump to throw an absolutely solid stream, just like a hydrant. Has smooth bore cylinder and brass valve seat; made to face the front or side by simply loosening set screw at top. It will go in hole as small as 4¾ inches. The upper cylinder is brass lined. Anti-freezing.

Furnished with either 2½- or 3 x 12-inch cylinders at the following prices:

With brass-lined cylinder.....	\$19 50
With brass body cylinder.....	22 50

If wanted complete with 1¼-inch galvanized pipe and ¾-inch galvanized steel rod, add to above prices 28 cents per foot for depth of well.

If Three-Way is desired, add \$3.50 to above prices. If Wind Mill Top is desired, add \$2.50 to above prices.



New Fountain

Wood Pumps

Size	Length	Cylinder	Unlined	Porcelain Lined
6 x 6 in.	6 ft.	3½ in.	\$8 50	\$10 50
6 x 6 in.	7 ft.	3½ in.	9 25	11 25
6 x 6 in.	8 ft.	3½ in.	10 00	12 00
6 x 6 in.	10 ft.	3½ in.	11 50	13 50

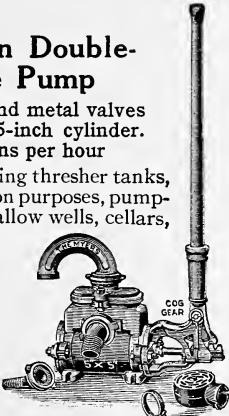
Tubing for above pumps, 4 x 4 in., in 8-, 10-, and 12-foot lengths, 30 cts. per ft.

Couplings with bands for 4 x 4-in. tubing. 90 cts. ea.

In ordering give depth from top of platform to bottom of well. Prices on other sizes Wood Pumps quoted on request.



Wood Pump



Giant Low-Down Double-Acting Force Pump

Has brass valve seats and metal valves faced with rubber. 5 x 5-inch cylinder. Capacity 2,000 gallons per hour

This is a fine Pump for filling thresher tanks, washing out boilers, irrigation purposes, pumping water from trenches, shallow wells, cellars, barnyards, etc. It is very compact and strong for its size and weight and has large and direct waterways and ample valve capacity. It is easy of operation, the Pump throwing an abundance of water with the least pumping labor. The cog gear head is reversible

and can be used on either end of Pump.

No. R479. With hose nipple, hose-band, and strainer, \$12.50.

Suction Hose

	Per foot
"Granger Brand." Wire lined, in 15- and 20-foot lengths.	
2-inch.....	\$0 50
"Cowen Brand." Wire lined, in 15- and 20-foot lengths.	
2-inch.....	80
"Tiger Brand." Hard rubber. ¾-inch.....	28
1-inch.....	31
1¼-inch.....	49

Pitcher Spout Pump

Has smooth-bore cylinder and brass valve seat, with revolving top, allowing lever to be placed at any desired position, and may be used successfully in cisterns or wells as deep as 25 feet.

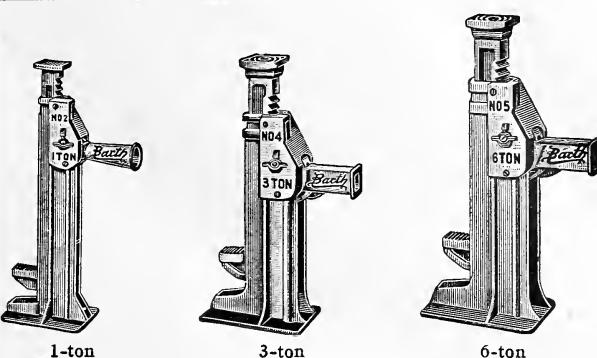
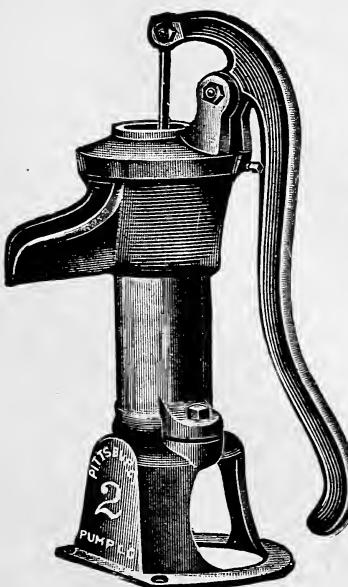
PRICES

No. 2. 3-inch cylinder, polished iron, \$3.50; brass lined, \$6.25.

No. 3. 3½-inch cylinder, polished iron, \$3.75; brass lined, \$7.

Galvanized Pipe for above. 1¼-inch, cut to length and threaded, 18 cts. per ft.

If you do not find what you want in this catalogue write us about it.

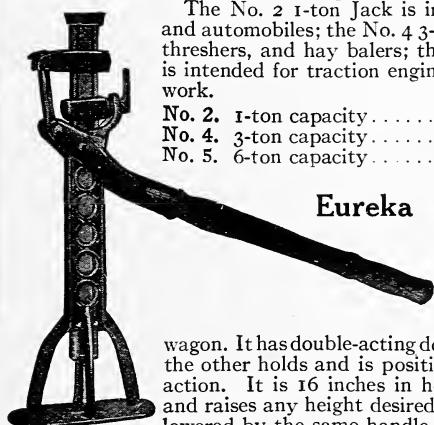


Barth Jacks

Barth Jacks are favorably known the country over. They are well made of the best material with a view to securing the greatest strength and durability with the lightest weight.

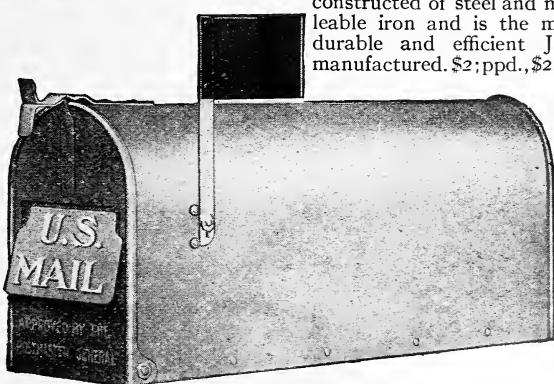
The No. 2 1-ton Jack is intended for wagons and automobiles; the No. 4 3-ton Jack for trucks, threshers, and hay balers; the No. 5 6-ton Jack is intended for traction engines and other heavy work.

No. 2. 1-ton capacity.....\$4 00
No. 4. 3-ton capacity.....8 00
No. 5. 6-ton capacity.....12 00



Eureka Wagon Jack

This Jack is light in weight but strong in lifting capacity; small in size but will easily raise a loaded wagon. It has double-acting dogs—what one raises the other holds and is positive and quick in its action. It is 16 inches in height when lowered and raises any height desired, to 27 inches. It is lowered by the same handle that raises it. It is constructed of steel and malleable iron and is the most durable and efficient Jack manufactured. \$2; ppd., \$2.20.



R. F. D. and Parcel Post Mail-Boxes

R. F. D. and Parcel Post Mail-Boxes open on end, with door hinged at bottom and equipped with automatic steel hasp, keeping it tightly closed and yet easily operated by carrier or patron. Door is so constructed as to be absolutely sleet-proof, as shown in cut. Box is fitted with easily operated right-angle signal visible at a great distance. This box possesses the highest standard of workmanship and excellence of finish. Substantial and operates perfectly. It is absolutely proof against all weather. Made of 20-gauge galvanized sheet steel, and finished in weather-proof aluminum bronze. Approved by Postmaster-General. Postpaid

No. 1. R. F. D. Size. 18½ x 7½ x 6¼ inches.....\$1 50 \$1 65
No. 2. Parcel Post Size. 23½ x 14 x 11 inches.....3 50 3 75

THE SUBMARINE WASHING MACHINES

General Description

WASHING MACHINE

The tub furnished is of extra-large size and thickness, and is corrugated on sides and bottom. The drain spout is attached to the bottom so that it is not necessary to tilt the tub to drain it. The cover is made of selected cypress and opens freely, as there is no mechanism on it.

The tub mechanism is controlled by a lever at the side of the machine and may be stopped and started at will.

The standard in the center of the tub is hot galvanized and will not rust. On this standard is mounted the disc and dolly support, which is also galvanized. This standard is held in place by four galvanized bolts, which run through the bottom of the tub and fasten to a plate 18 inches long underneath the tub. This makes it possible, by tightening the bolts to insure a watertight joint and also keeps the standard in a vertical position in the center of the tub.

Some prefer a flat disc type Washer and others a peg type; both have their merits. All Submarine Washers are furnished with both disc and dolly so that the operator can use either the disc or the dolly in the same washing as preferred on the different kinds of clothes.

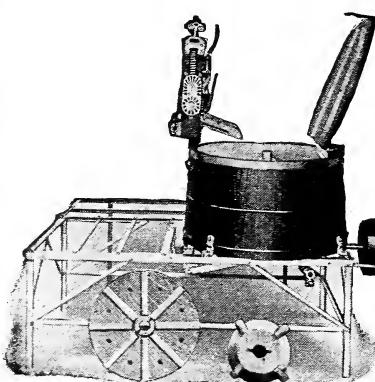
SWINGING WRINGER

One of the important and attractive features about this machine is the four-position swinging reversible Wringer, as it enables the operator to do all the wringing by power with one Wringer. The clothes may be wrung from a soaking tub into the washer, from there into the rinse tub, then into the bluing tub and from there into the basket. The wringer can be used for the last two operations while the machine is washing another tubful of clothes.

This wringer may be used in connection with stationary tubs, as it is high enough to swing over tubs of this kind.

THE WRINGER

The Wringer is mounted on an iron and steel standard which swings and locks into four different positions. It is the very best grade wood frame, best enclosed cog type, with highest grade rolls, having a safety release on top, which with slight pressure will release the rolls instantly, also having a double-jointed lower wringer shaft roll which will eliminate all shaft breakage which might occur. Full shaft driven. Extra-large reversible waterboard. It may be operated either forward or reverse or stopped instantly, by a controlling lever conveniently placed at the top and left of the wringer.



No. D-1

No. D-1 Submarine Power Washer

With swinging reversible wringer and interchangeable disc and dolly. \$53.

No. D-2 Submarine Electric Washer

This machine is equipped with motor, castors, and everything complete to make it one of the highest grade long-bench electric machines on the market. With $\frac{1}{4}$ H. P. Motor, swinging reversible wringer, disc and dolly complete, all ready to run, \$87.75.

A Power Washer puts an end to wash-day drudgery.

FRAME CONSTRUCTION

The frame which supports the tub and wringer mechanism is constructed of angle steel securely braced, and is light, strong, and rigid. The frame is 24 inches wide and 43 inches long, and provides a space for the rinse tub. It is equipped with a detachable angle steel extension rack the full length of the frame, which provides a space for the bluing tub and the basket and which may be folded up out of the way when not in use.

DRIVING MECHANISM

The iron frame which holds the mechanism for driving the tub and wringer has all the bearings cast in one piece, so there is no chance for them to get out of alignment and cause wear. This iron frame is securely bolted to the steel frame of the machine. The machine is back geared 4 to 1, and a 10-inch drive pulley is furnished, which should be operated about 200 revolutions per minute, but not faster. This is important. We can furnish 8-, 10-, 12-, 14-, or 15-inch pulleys on special order.

All gears on the machines are enclosed in injury-proof cases, and the machine is full shaft driven. There are no chains nor belts on the wringer. All driving mechanism is on the opposite side from where the operator stands when using the machine.

ELECTRIC EQUIPMENT

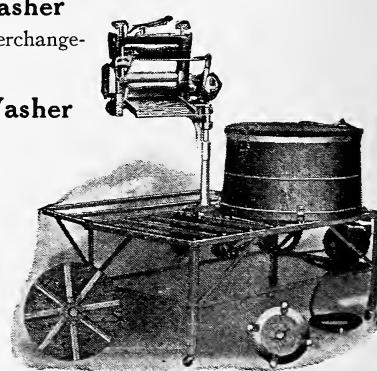
The motor furnished with electric machines is of the very highest grade, and is designed expressly for the purpose. It is $\frac{1}{4}$ horse-power and is powerful enough to operate the Washer and wringer at the same time under full load. Motor is mounted on an insulated block which is bolted to the steel frame of the machine. The drive shaft is fitted with a grooved pulley which is driven by a belt from the motor. Ten feet of waterproof reinforced cord with plug to attach to electric light socket is furnished.

COST OF OPERATING ELECTRIC WASHER

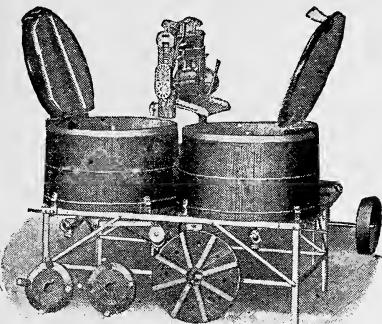
Is about 2 cents per hour. For a family of six people this will amount to about 3 cents a week for current to operate both Washer and wringer.

In ordering Electric Washers, it is necessary to state whether it is to be used with direct or alternating current, also voltage.

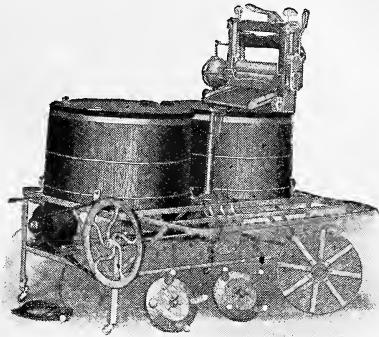
All Submarine Washers are equipped with both disc and dolly and have no gearing on the lid.



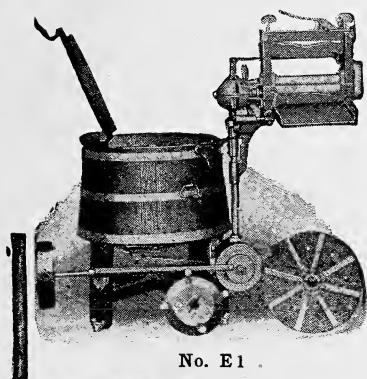
No. D-2



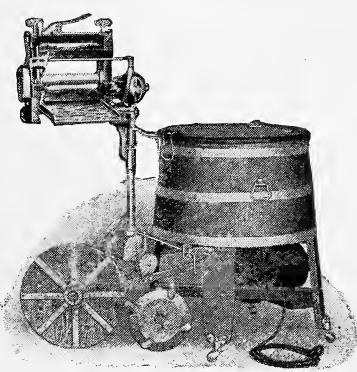
No. D5



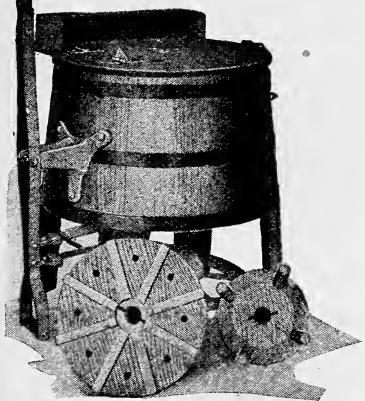
No. D6



No. E1



No. E2



The Submarine Hand Washer

No. D5 Submarine Twin-Tub Power Washer

With Swinging Reversible Wringer and Interchangeable Disc and Dolly

A twin-tub power Washing Machine allows one to do the washing in just one-half the time. Two dollies and one disc are furnished with each machine. \$69.50.

No. D6 Submarine Twin-Tub Electric Washer

With Swinging Reversible Wringer and Interchangeable Disc and Dolly

This twin-tub electric Washing Machine allows one to operate two tubs at the same time or independently of each other, with or without the operation of the wringer. Two dollies and one disc are furnished with each machine. \$107.

No. E1 Submarine

With Swinging Reversible Wringer

The E1 and E2 Submarine Power Washers have been designed to meet the demand for a machine that requires less floor-space than the bench type Washer, but which has all the labor-saving advantages of the large machine. It is simple in construction yet built to stand hard use and will give satisfactory service. It is moderate in price and has many points of merit not found in other machines of this type. \$43.

No. E2 Submarine Electric Washer

With Swinging Reversible Wringer. Price, \$78

Submarine Hand Washer

This high speed hand Washer is one of the easiest running Washing Machines on the market today. The handle is constructed with a foot pedal at the bottom so that it may be run by the foot in connection with the good-sized handle at the top, or each separately. The fly-wheel and mechanism are all placed underneath the tub, out of the operator's way, which makes it injury-proof. Placing this mechanism underneath the tub on two strong braces, instead of on the top or side, insures a double-lived hand Washing Machine. It is impossible to get this machine on dead center as a small spring underneath prevents the fly-wheel from stopping on this point. For an easy-running, quick washing, long-lived hand machine you cannot buy a better machine than the Submarine.

This machine is equipped with both dolly and disc. Both have their merits, but with this machine the operator may use either the disc or the dolly in the same washing, as preferred, on the different kinds of clothes. \$19.

No. 2 Sandusky Washer

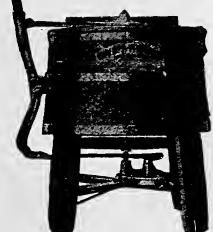
(FORMERLY THE ONE MINUTE)

The Improved Sandusky Washer is all that can be desired in a hand power Washing Machine. The most modern method in machine construction has been adopted and incorporated in this Washer.

Years have demonstrated that the process of stirring the clothes, or agitating them back and forth in the water by means of a dolly, which oscillates rapidly, is the best method of removing the dirt.

The lever has a fulcrum on the side of the tub and in the upper end of the lever is placed a handle for the operator, and at the lower end it is attached to a double joint fastened on to a pitman, which again is fastened to a crank, that with every stroke of the lever turns a machine cut gear-wheel. This gear-wheel is enclosed in a gear case and is imbedded in hard oil and mounted on ball bearings and in turn drives a machine-cut pinion enclosed in the same case and mounted on ball bearings.

The tub is made from selected Virginia cedar, kiln dried and free from flaws and imperfections. It is finished in one coat of liquid filler and two coats of high grade varnish. With Dolly only, \$18.



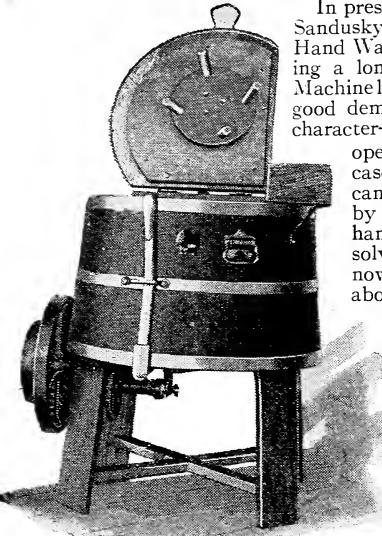
No. 3 Sandusky Combination Power and Hand-Power Washer

In presenting to the public our new Sandusky Combination Power and Hand Washer, we feel we are filling a long-felt want in the Washing Machine line. There has always been a good demand for a machine of this character—a machine which can be operated by an engine, or in case of necessity one which can be operated just as easily by hand-power as any ordinary hand-power machine. We have solved the problem and are now ready to offer you the above type of machine.

Here is a machine which not only fills the above requirement, but one which also is simple in construction, easy to operate, and being self-lubricating requires no attention along those lines.

The gears of this machine are all cut gears, same as used on the

No. 2 and practically noiseless. Price, \$21.

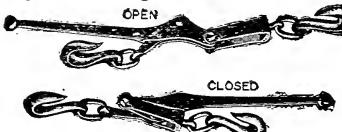


The Goodyear Load Binder

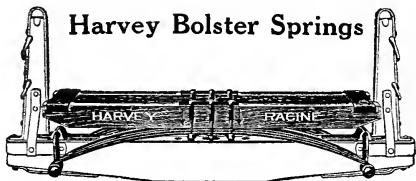
The Goodyear binds equally successfully, lumber, ties, logs, timbers, mixed lumber, boilers, pipe, poles, in fact, any load which requires binding with a chain and fits any chain, from $\frac{1}{4}$ to $\frac{1}{2}$ inch,

is easily applied, and is the greatest time-saver for the teamster ever invented. Saves its cost many times

in a year, with absolutely no danger of accident. \$3.25 each; postpaid, \$3.45.



Harvey Bolster Springs



You must be interested in anything that will add to your comfort and save you money. This is just what a pair of our Bolster Springs will do for you. They will change your farm wagon into a spring wagon. They relieve the jars, jolts, strains and noise of a springless wagon. They make it run easier, smoother, and quieter.

Price per set—Always give capacity and length wanted

Width and No. of leaves	Capacity lbs.	For 36- or 38-in. bolster	For 40- or 42-in. bolster
1 $\frac{1}{2}$ x 3	1,000	\$8 00	\$8 50
1 $\frac{1}{2}$ x 4	1,500	9 00	10 00
1 $\frac{3}{4}$ x 4	2,000	11 00	12 00
1 $\frac{3}{4}$ x 5	2,500	12 00	13 00
2 x 5	3,000	14 00	15 00
2 x 6	4,000	16 00	18 00
2 x 7	5,000	18 00	20 00
2 $\frac{1}{2}$ x 6	6,000	20 00	22 00
2 $\frac{1}{2}$ x 8	8,000	24 00	26 00
2 $\frac{1}{2}$ x 10	10,000	28 00	30 00

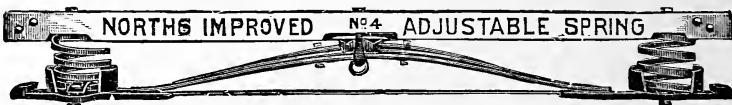


Miniature Farm Wagon

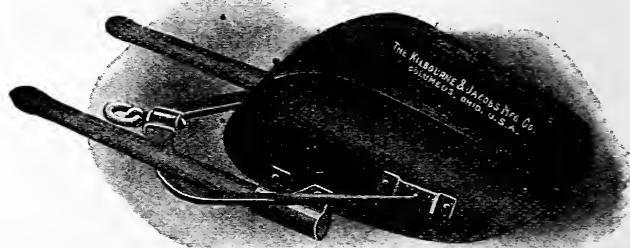
The most perfect reproduction in miniature of the full-sized farm wagon on the market. Not a toy wagon. We can assure you it is the strongest and handsomest Miniature Wagon on the market. The dimensions are as follows:

Body, 18 x 36 inches, with oak frame. The sides and ends can be taken off, leaving bed with stakes, or the entire body may be removed, leaving gear in shape to be used in numberless ways. The gearing is made exactly like a farm wagon, having bent hound and adjustable reach.

Has seat, and a hand. tongue. Can furnish shafts for dog or goat at an additional cost. Price, with tongue \$10, shafts extra \$1.



Capacity	Price per set	42-inch
1,000 lbs.	\$5 00	
1,500 lbs.	6 00	
2,000 lbs.	7 00	



Columbus Steel Drag Scraper

Absolutely seamless throughout

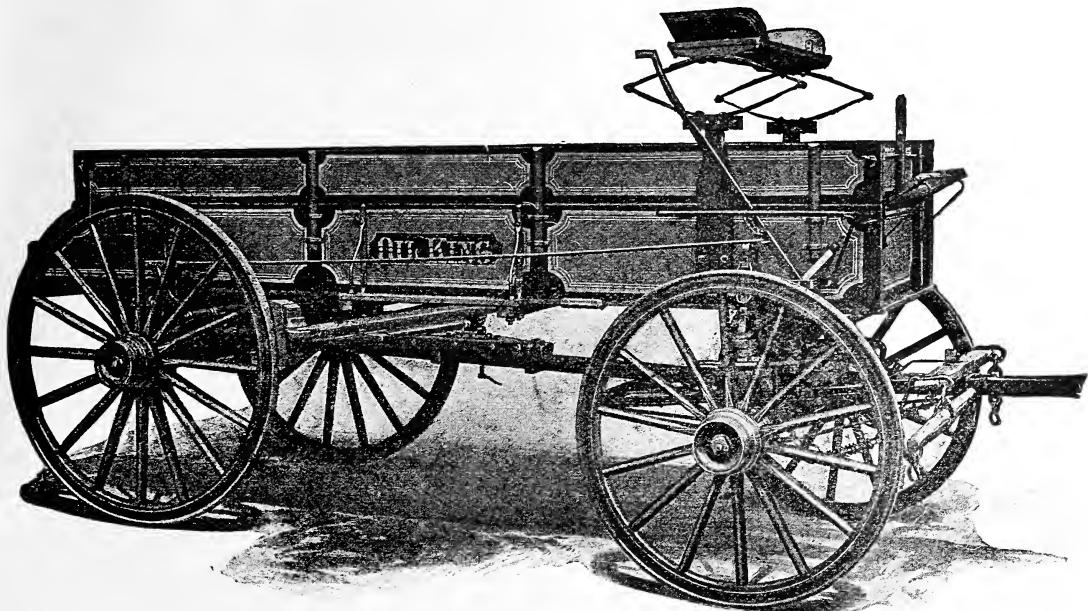
The most economical tool made for making and mending roads. The bails are of steel and of improved pattern, with strong and perfectly working swivels.

No. 1. Carries 7 feet of earth. Used for long haul or down grade.

Size of bowl: Top of back to cutting edge, 34 inches; width, 33 inches; depth, 10 inches; weight, 105 pounds. With runners, \$13.

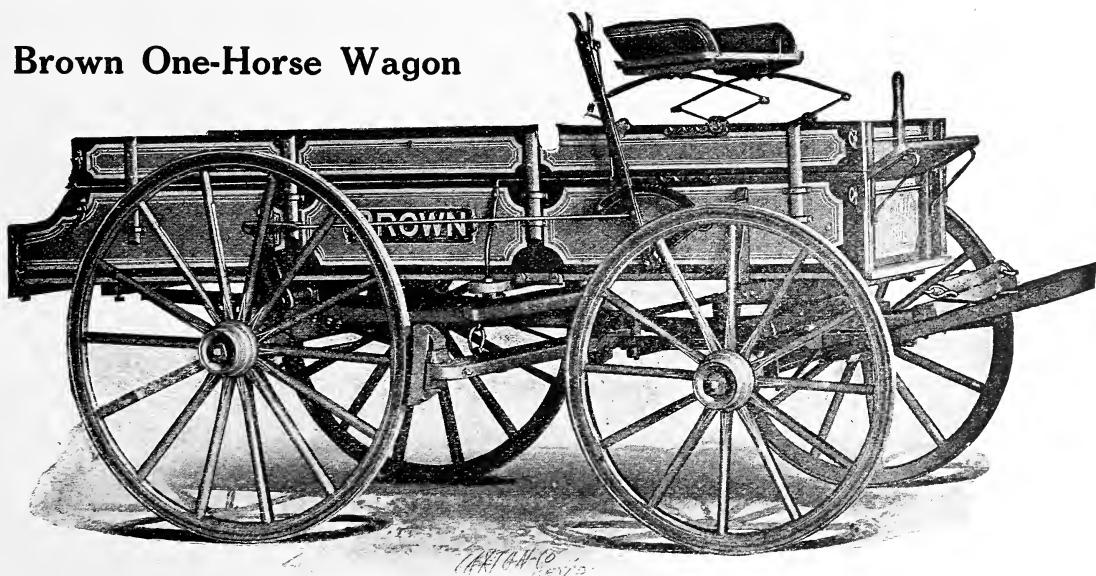
No. 2. Carries 5 feet of earth. For all ordinary grading, farm, road or township work. Size of bowl: Top of back to cutting edge, 31 $\frac{1}{2}$ inches; width, 29 $\frac{1}{2}$ inches; depth, 9 $\frac{1}{2}$ inches; weight, 97 pounds. With runners, \$12.75.

The Oil King Two-Horse Wagon



The Oil King Wagons are made from the very best material obtainable, are well ironed and specially adapted for general farm purposes and heavy hauling. We now furnish them with low front wheels turning under body to the coupling pole. When made this way and equipped with bolster springs the Oil King makes an ideal market wagon. We furnish them with any width of tire desired, with steel or cast skeins, stiff tongue and tongue chains, or drop tongue and neckyoke. Write for special catalogue and prices, specifying style and size of wagon in which you are interested.

Brown One-Horse Wagon



The Brown One-Horse Wagon is made extra heavy and well ironed. It will outwear two ordinary one-horse Wagons. Made with either cast or steel skeins, top gear or swinging brake; with falling tongue and neckyoke for two horses when desired. Furnished in three sizes from $2\frac{1}{2} \times 8$ inches to 3×9 inches, weighing from 800 to 1,000 pounds, with a capacity from 1,500 to 3,000 pounds. Regular tire $1\frac{1}{2} \times \frac{1}{2}$ inches, but other widths and thicknesses can be furnished. Special catalogue and prices on request.

Steel Wheel Farm Trucks

We do not have space to show these here but will send special circular and prices on request.

The Ohio One-Horse Wagon

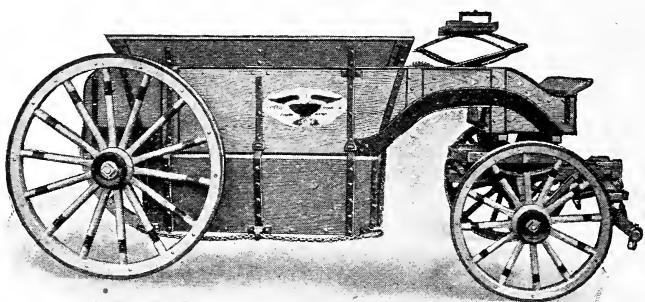
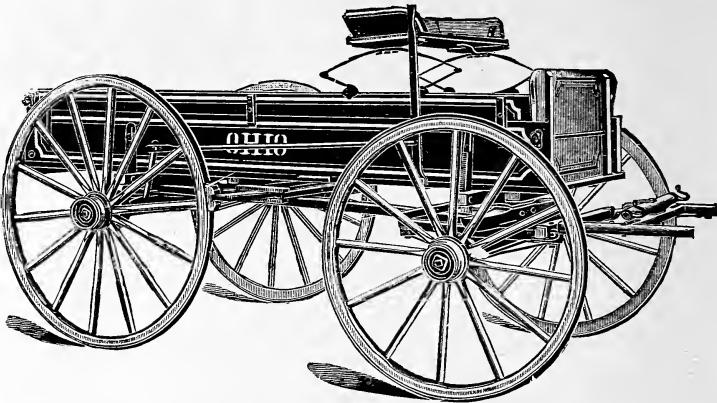
No. 19 Ohio. $2\frac{3}{8} \times 7$ Skein

This Wagon is designed to meet the demand for a moderate-priced Wagon for light work. Made in two sizes, No. 18, $2\frac{1}{4} \times 7$ skein, and No. 19, $2\frac{3}{8} \times 7$ skein.

Nothing but the best material is used in their construction: Hickory axies, second-growth oak and hickory spokes, white oak reaches, with best yellow poplar in the boxes.

Furnished with top gear brake, box brake, or without brake.

Dimensions of lower bed: Depth, 10 inches; length inside measure, $8\frac{1}{2}$ feet; width between standards, 38 inches; top box, 4 inches high; wheels, regular height, 3 feet 6 inches front, 4 feet rear; tire, $1\frac{3}{8} \times \frac{3}{8}$ inches. Special catalogue and prices furnished on request.



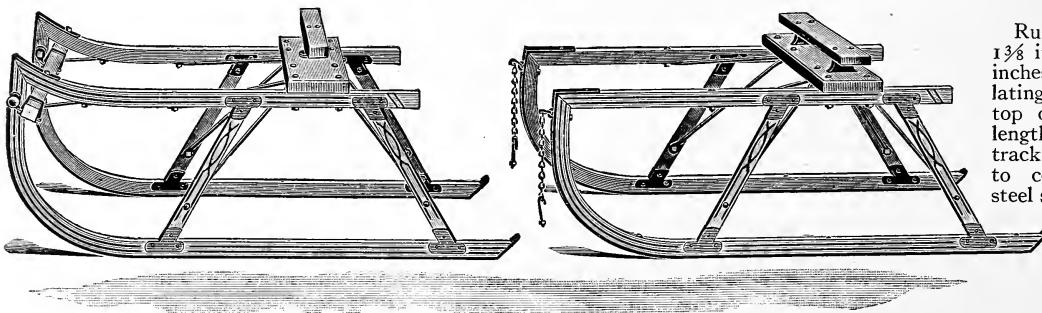
The Eagle Dump Wagon

It has made a place for itself during the last fifteen years that is seldom attained by a like product. Its growth of popularity has not only been rapid but constant, until it is today the most widely used bottom Dump Wagon in the United States. It is the favorite of the large user of Dumpers who places his orders in carload lots, and it is just as popular with the user who has but one team, for the wagon is well made, of high-grade material and workmanship, and is equipped with the most up-to-date and practical devices and appliances that go to make a usable and serviceable Dump Wagon. Its draft is easy and its service is long. We ask your consideration when you are in the market for Dump Wagons or Dump Boxes. Ask for catalogue and prices

BOB-SLEDS

Our Bob-Sleds are made to order out of selected hardwood lumber, painted red, striped in black and white, nicely varnished. Prices will be quoted on request.

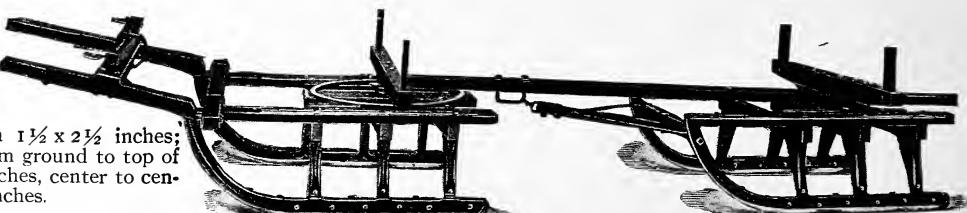
No. 21. Light Bob-Sled



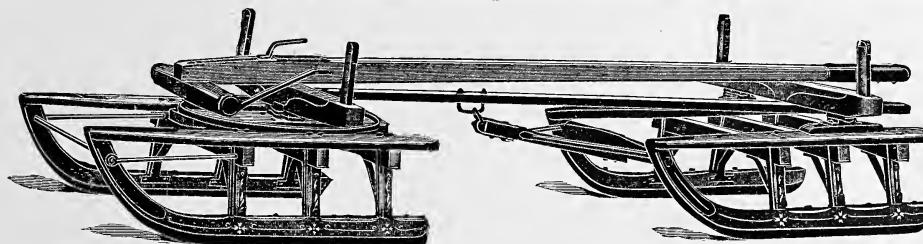
Runners and raves $1\frac{3}{8} \times 6$ inches; beams $1\frac{3}{8} \times 6$ inches; hind bolster oscillating; height from ground to top of bolster 18 inches; length on run 37 inches; track 37 inches from center to center with $1\frac{3}{8}$ -inch steel shoe.

No. 2. Snow King—One-Horse Three-Knee Bob-Sled

Full iron circle; straight heel shaft with combination shift bar for either center or side draft; runners $1\frac{1}{4} \times 2$ inches; cast shoe 1 inch on the face, 33 inches on the run; beam $1\frac{1}{2} \times 2\frac{1}{2}$ inches; raves 1 x 6 inches; height from ground to top of bolster 21 inches; track 37 inches, center to center, bolsters either 38 or 42 inches.



No. 8. Snow King—Two-Horse Three-Knee Bob-Sled

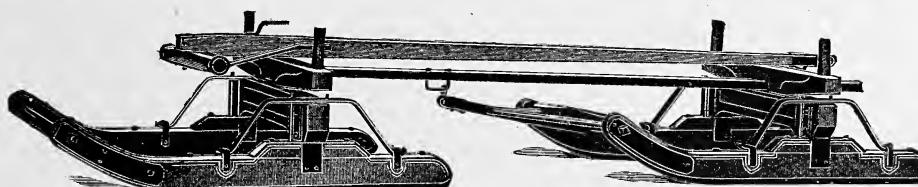
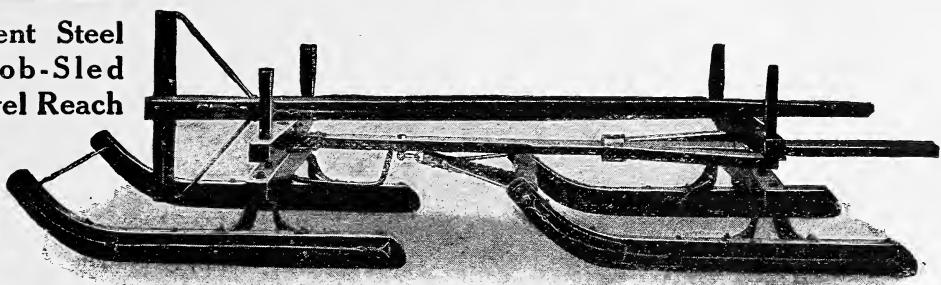


Full iron circle; runners $1\frac{3}{4}$ x 3 inches; raves $1\frac{1}{4}$ x 7 inches; height of sled from ground to top of bolster 22 inches; benches and raves bolted together with 24 bolts, which makes a very strongly constructed sled; track 37 inches from center to center, bolsters 38, 39, 40, or 42 inches; supplied regularly with drop pole, can also be supplied with coach pole with chain ends.

No. 34. Mandt Patent Steel Knee, Oscillating Bob-Sled with Hounds and Swivel Reach

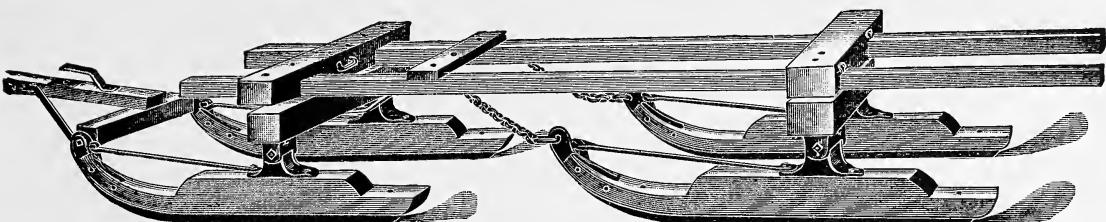
Runners 2 x 4 inches; cast shoe $1\frac{3}{4}$ inches on the face, 40 inches on the run; beams and bolsters $3\frac{1}{2}$ x $4\frac{1}{2}$ inches; track 37 inches from center to center; bolsters 38 or 42 inches.

Prices will be quoted on request



No. 18 Snow King Bob-Sled, Maine Pattern

Runners $2\frac{1}{2}$ x 5 inches; cast shoe $2\frac{1}{2}$ inches on the face, 54 inches on the run; beams $4\frac{1}{2}$ x $7\frac{1}{2}$ inches; bolsters $3\frac{1}{2}$ x $4\frac{1}{2}$ inches; height of sled from ground to top of bolster 22 inches; track 37 inches from center to center.



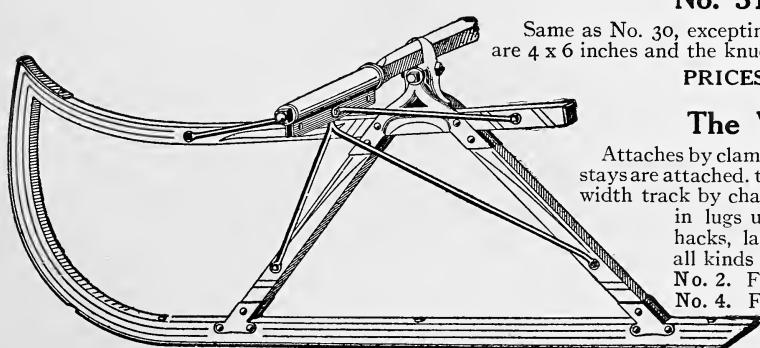
No. 30 Oscillating Bob-Sled

Runners 2 x 4 inches; cast shoe full width of runner 4 feet long with flange 1 inch deep in center; bunks and bolsters 4 x 5 inches; track 38 inches from center to center, supplied with either single or double reach; bolsters 38 or 42 inches.

No. 31 Oscillating Bob-Sled

Same as No. 30, excepting runners are 5 inches wide and bunks and bolsters are 4 x 6 inches and the knuckles are heavier.

PRICES WILL BE QUOTED ON REQUEST

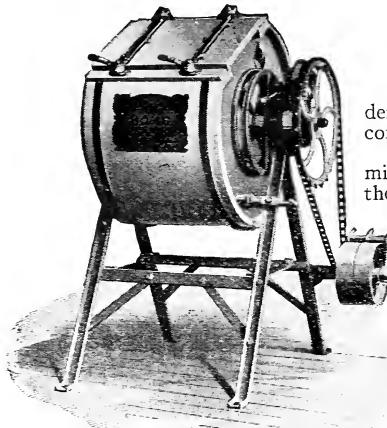


The Wyeth Runner Attachment

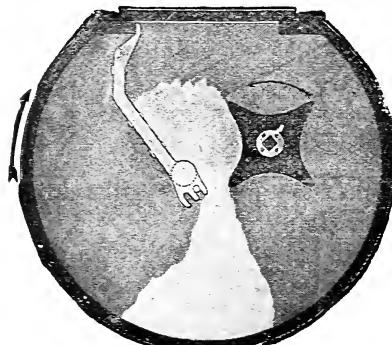
Attaches by clamps to square part of axle, relieving spindles, to which stays are attached, thoroughly bracing the runner. Adjustable to different width track by changing bolt in upper end of braces to different holes in lugs under box. For carriages, buggies, grocers' wagons, hacks, laundry wagons, surreys, dairy wagons, hearse, and all kinds of low-down vehicles.

Per set

No. 2. For $\frac{1}{2}$ - or 1-inch axle	\$9 00
No. 4. For $1\frac{1}{4}$ -inch axle	11 00
No. 6. For $1\frac{3}{8}$ -inch axle	13 00
No. 7. For $1\frac{1}{2}$ -inch axle	13 00



No. 1-H.P. Minnetonna. Can be belted to your gasoline engine or electric motor



Cross-section view, showing how the butter is worked between two rolls

and then the butter is almost sure to be only a fair quality. There is no exposure to air with the Minnetonna and no chance for flies to get into the butter while working it—you home buttermakers know this is a distinct advantage.

Factory No.	Capacity drum half full	Butter-working capacity	Shipping weight	Style	With electric motor
1-H.	12 gal.	3 to 20 lbs.	195 lbs.	Hand Operated only.....	\$48 00
1-H.P.	12 gal.	3 to 20 lbs.	210 lbs.	Hand and Power.....	53 00
2-H.P.	20 gal.	5 to 40 lbs.	250 lbs.	Hand and Power.....	59 00
3-P.	40 gal.	10 to 100 lbs.	375 lbs.	Power.....	125 00
					275 00

BEFORE YOU BUY ANOTHER CHURN WRITE FOR SPECIAL CATALOGUE OF THE MINNETONNA

The Lightning Glass Churn

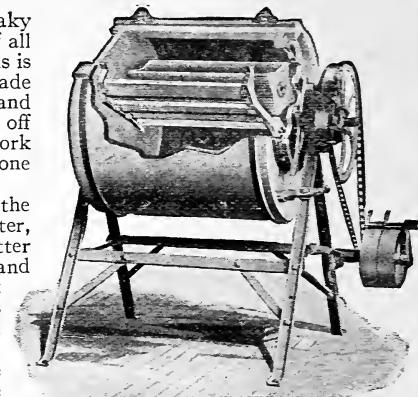
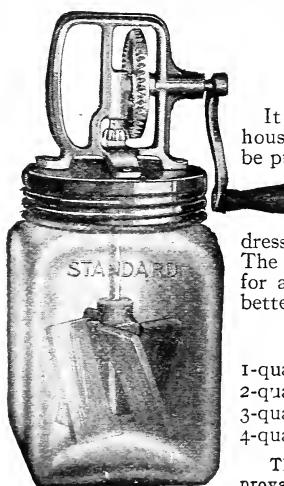
It is the first and only device of its kind that meets all the requirements of the exacting and up-to-date housewife. As a Churn it enables her to keep her family supplied with fresh butter which she knows to be pure, sweet and wholesome, or she can make it as necessity demands. She can do this, too, at a cost little or no greater than she is paying for an inferior article from her dealer, and with no great exertion on her part.

As a mixer this little device is indispensable to every household. For making a perfect salad dressing it has no equal. Here especially the sanitary metal dasher will be appreciated by every housewife. The oil cannot be absorbed as in one made of wood. For whipping cream or beating eggs, and, in fact, for any number of operations that will occur to every woman, it is equally valuable. It does the work better and takes less time and effort to do it. Made in 1-, 2-, 3-, and 4-quart sizes.

PRICES

1-quart	\$1 50	Postpaid \$1 65
2-quart	2 00	2 20
3-quart	2 50	2 70
4-quart	3 00	3 25

Thousands of these small churning devices have been sold in the last few years and they have the unqualified approval of every housewife who has used them.



No. 2-H.P. Minnetonna, with part of side and one end cut away to show the position of basket and working roll inside of all Minnetonna models.

The Minnetonna Home Butter Maker is, in working principle, really a miniature of the wonderfully efficient butter-making machines used in big creameries—so simplified and perfected in construction, so modified in size and price that it is placed within reach of the average farmer. Your churning is done in fifteen minutes or less with the Minnetonna. It takes about ten minutes to work and finish it into the finest creamy butter you ever saw. The secret is all in the basket and rolls. In churning, the cream is vigorously dashed against and through this basket. It is so thoroughly agitated that the butter "comes" in one-half to one-fifth the time required to churn in any ordinary barrel or dasher churn.

This thorough agitation also breaks all the butter fat particles away from the curd, so they all go to make butter instead of leaving some of it in the buttermilk.

The glass peep hole in one end of the drum is always milk wet during churning. The first time the glass clears entirely, you know the butter has "come."

When the churning is done you simply open the faucet at the bottom of the barrel and draw off the buttermilk. This faucet connects with a strainer tube made of perforated metal which prevents the loss of any butter fat particles, which will soon go a long way to paying for it. Next close the faucet and pour in some clean cold water for washing the butter fat globules.

In the Minnetonna the butter comes in flaky granules of even size which are easily cleansed of all the buttermilk by a few turns of the barrel. This is very essential if you are to have an extra fine grade of creamy butter, which will be of good flavor and good keeping quality. When you have drawn off the wash-water the butter is ready to work. Work in moisture, add salt—and work in salt, all done within five minutes.

The Minnetonna process greatly shortens the time and reduces the labor of working the butter, produces the correct texture of body in the butter and incorporates the proper amount of moisture and salt, distributing the moisture evenly throughout the butter, preventing water pockets and makes a dry appearing, firm body, perfect texture and maximum overrun.

With old-style churning when you take the butter out of the barrel it is in a soft mass, the buttermilk has not been washed out thoroughly, the butter has not been worked, it has not been salted, and the operation is not in any way complete. It takes a long time with the ordinary farm churn to finish the job after the churning is done,

and then the butter is almost sure to be only a fair quality. There is no exposure to air with the Minnetonna and no chance for flies to get into the butter while working it—you home buttermakers know this is a distinct advantage.



Standard Barrel Churn

This Churn is no experiment. Thousands are in use in every state in the Union, and in foreign countries, giving universal satisfaction. It is made of the best kiln-dried white ash, the staves being tongued and grooved. The frame is of hard wood and neatly made. There are no paddles or dashers inside to cut the grain in the butter—no friction to make black streaks—is easily cleaned and operated. It is guaranteed to make better butter and more of it than any paddle Churn on the market. Instructions for making gilt-edge butter accompany each Churn.

SIZES

No.	Gals.	Holds	Gals.	Churns	Price
0.....	5.....	3.....			\$8 00
1.....	9.....	5.....			9 00
2.....	13.....	7.....			10 00
3.....	18.....	10.....			11 00
4.....	21.....	12.....			14 00
5.....	26.....	15.....			19 00
6.....	40.....	25.....			22 00

All of above Churns are furnished with stands.
Proper speed, 60 to 70 R. P. M.



12-inch Single Pulley with hand crank attached

Power Pulleys

Double Pulley

With the shaft like illustration, for any of the above churns. Can be attached by removing three bolts and three screws and put on in place of crank shaft. Are furnished as follows:

12-inch diam., 1 1/2-inch face.....\$4 50
14-inch diam., 2-inch face.....5 50



Double Pulley with shaft

Friction Clutch Pulley

14-inch diam., 2-inch face.....\$7 00

Single Pulley

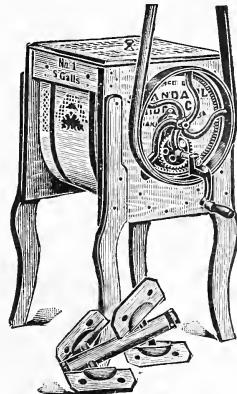
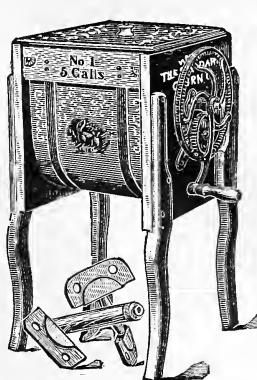
We can also furnish a Single Pulley to attach to crank shaft of any of the above churns as follows:

12-inch diameter, 1 1/2-inch face.....\$2 50
14-inch diameter, 2-inch face.....3 00

The 12-inch Single Pulley is fitted with a detachable hand crank so when it is fitted to a churn it can be used by hand or power.

Bottle-Fillers • Bottle-Washers Wash Sinks • Butter Workers

In making up our catalogue we found that our limited space prohibited showing these articles. Special circulars and prices will be furnished on request.

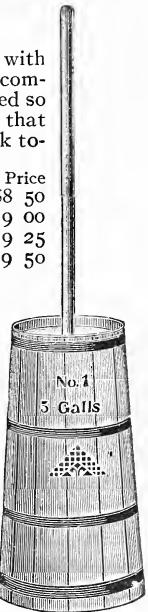


Anti-Bent Wood Churn

A high-grade, reasonably priced Churn that, with little labor, rapidly makes good clean butter that commands the highest market prices. It is constructed so that the grain of the wood in the body runs with that of the ends, allowing all parts to swell and shrink together, which prevents splitting.

No.	Gals.	Churns	Price
1.....	5.....		\$8 50
2.....	7.....		9 00
3.....	10.....		9 25
4.....	12.....		9 50

Power Pulley, 11 1/2 x 1 1/2 inches, with detachable crank instead of hand-wheel. \$1.25 extra.
Double Power Pulley, 6 x 1 1/2 inches. \$5 extra.



Standard Dash Churn

Our Sunken Lid Dash Churn is made of select hardwood which emits neither odor nor taste. All staves grooved and tongued, and all uniform, keeping Churn in perfect shape. Sunken lid prevents cream running down sides. Our Dash Churns are "turned out" inside by machinery after Churn is set up, making inside and outside perfectly smooth and easier to keep clean.

No. 00.	Churns 3 gallons.....	\$2 00
No. 0.	Churns 4 gallons.....	2 25
No. 1.	Churns 5 gallons.....	2 50
No. 2.	Churns 7 gallons.....	2 75
No. 3.	Churns 10 gallons.....	3 00
No. 4.	Churns 12 gallons.....	3 25

The Ayers Oak Dash Churn

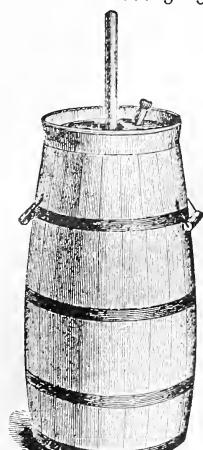
With Galvanized Trimmings

No Churn was ever introduced to the trade that gives such universal satisfaction as has the Ayers Oak Dash.

Being very different in construction from any other Dash Churn, it immediately commands itself to the observer. Made from the best grade of white oak, with galvanized hoops, ash dasher, and well varnished.

PRICES

6-gal.....	\$4 75	13-gal.....	\$5 75
8-gal.....	5 00	16-gal.....	6 00
10-gal.....	5 25		



**RENFREW CREAM
SEPARATOR**
A Separator that is different



Renfrew

The Separator that is easy to turn

The Renfrew Cream Separator has a reputation as the easiest running Separator on the market; in fact, the weight of the handle will start the gearing. This is because of the simplified gearing, chain-drive, and self-oiling system which reduces friction and wear and tear on all moving parts.

The Renfrew Cream Separator has achieved remarkable success in the eight years it has been on the market. This is due entirely to the splendid work it does and the unqualified endorsement of the man who owns one and tells his neighbors about it. In other words, satisfied customers are our greatest asset, and the more Separators we sell the more influence the Renfrew exerts in the trade.

This success is due largely to features of the Renfrew which are exclusive—not possessed by any other Separator. Chief among these are the curved wing bowl, the style of neck bearing, the absolute self-oiling system, interchangeable capacity, and the clutch attached to the spindle and in the base of the machine.

To these exclusive features add the high crank, low supply tank, chain drive and steel discs, and remember the Renfrew has the

advantage of all the good things found in other makes, and several practical ideas that are to be found only in the Renfrew.

The Renfrew is built from start to finish with such careful attention to details that we feel it is as nearly mechanically perfect as human ingenuity can make it. All these things combine to make it durable, trouble-proof and easy to run.

But after all the most important thing about a Cream Separator is how well it separates the cream from the whole milk. In this respect the Renfrew has no superior, as any dairyman or farmer who owns one will tell you.

The Renfrew gets 99.99 per cent of the butter-fat. It will put your dairy on a profit-paying basis and stop all butter-fat loss.

Capacity	Price
No. 2..... 350 lbs.	\$70 00
4..... 450 lbs.	80 00
6..... 650 lbs.	90 00
8..... 800 lbs.	105 00
10..... 1,000 lbs.	115 00

Before you buy a cream separator, call and see the Renfrew or send for descriptive catalogue

Star Cream Separator

Easiest, Cleanest, Simplest Cream Separator of its Kind on the Market. Reversible Strainer, Cover and Aerator—Inclined Bottom.

Made of the best material to be found on the market, with the most perfectly constructed bottom, allowing every particle of cream and milk to be drawn, without disturbing the can, thereby preventing all liability of remixing cream and milk after being separated.

DIRECTIONS. Place the Separator on a bench or box in any convenient place, with the front projecting over a little so that a pail can be placed under the faucet, without disturbing the can when drawing off the milk and cream.

Place cover, inside up, on Separator and pour your milk through the strainer into the Separator. In warm weather dilute with same amount of water that you have of milk; in cold weather, or if water is more than ordinarily cold, a less amount has been found to be sufficient; then replace cover after changing strainer to outside of cover and allow to stand.

Price List—With Cover

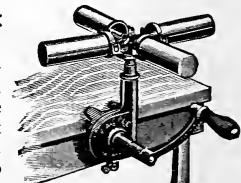
Capacity	Quarts	Price
No. 0. 1 cow.....	24	\$4 50
No. 1. 1 to 2 cows.....	48	5 50
No. 2. 3 to 4 cows.....	88	6 00
No. 3. 6 to 8 cows.....	118	7 00
No. 4. 8 to 10 cows.....	130	8 00

The Facile Jr. Babcock Milk Tester

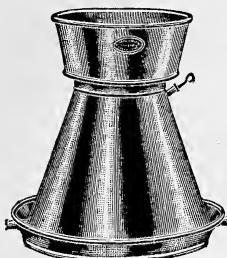
An exceedingly simple, light, compact, and carefully designed apparatus, especially adapted to the use of the dairy, and also, on account of its light weight, to the traveling dairy inspector. The working parts consist of but two cut gears, namely, a steel spiral gear and steel spindle with worm thread, entirely enclosed in handsome cast iron case. It is fitted with deep seamless brass swinging pockets and malleable iron tinned head; absolutely safe. Hot water may be put in pockets to keep fat melted. Turns very easily without vibration or jar, and can be readily attached for operation to any table or bench.

Complete with full set of glassware, consisting of test bottles, pipette, and acid measure, also test bottle brush and bottle of acid, with full directions for use.

2-bottle Machine, with milk-test bottle.....	\$6 50
2-bottle Machine, with 2 milk- and 2 cream-test bottles.....	7 50
4-bottle Machine, with milk-test bottles.....	7 50
4-bottle Machine, with 2 milk- and 2 cream-test bottles.....	8 00



Improved Champion Milk Cooler



It is a perfect aérator, removing all flavors arising from excessive cabbage, turnip, or silo rations.

It is a thorough cooler, reducing the temperature of the milk instantly nearly to the temperature of the cooling medium.

It is low down, combining greatest cooling surface with least height.

It is as simple in construction and easily cleaned as a pail—no joints or seams for the harboring of impurities and no crooked pipes to rust.

Its cost is small—compared to the saving effected it is nothing.

It saves time and labor in handling of milk for any purpose.

It is a complete deodorizer, removing the animal heat or cowy taste and all odors arising from the absorption by the milk of stable or other unpleasant gases.

It is equally well adapted to the use of any cooling medium, We have other styles of Milk Coolers and Aérators, not shown in this catalogue.

either running water, ice water, or if a very low temperature is not required, ordinary well or spring water.

Fast Cooling Important. It is but the work of a moment to fill the Improved Champion with cold or ice water, or attach a $\frac{1}{2}$ -inch stream of flowing spring water. If the agitator is used it keeps the medium circulating near the cooling surface. The milk flows over the cooling surface through machine-punched holes scientifically calibrated so that milk film is even and cooling is sure and certain.

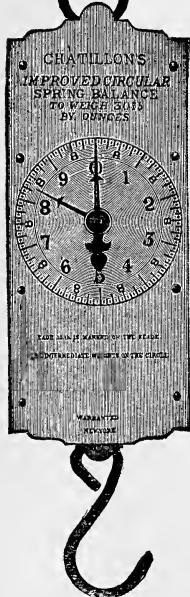
The following sizes of the Champion are gauged as nearly as possible to take care of the milk as fast as drawn from various sized dairies with the average number of milkers. Be sure to get one large enough, as best cooling results are obtained with low pressure of milk in the receiver.

Prices Include Double Cheese Cloth Strainer and Spring Pins

No.	Capacity	milk receiver	Size of dairy	Takes care of	Price
No. 2	18 qts.	1 to 25 cows	3 milkers	....	\$10 00
No. 3	34 qts.	25 to 50 cows	5 milkers	....	12 00
No. 4	52 qts.	50 to 100 cows	8 milkers	....	15 00

Special circular and prices will be sent on request

Improved Decimal Milk Scale



This spring balance is intended especially for use in connection with the Babcock Test for keeping records of the quantity of milk from individual cows, together with the per cent of fat, so as to calculate the butter-yield. The Scale is provided with a loose pointer which, by means of a thumb-screw, may be set anywhere on the dial to offset the weight of the milk pail, so this does not have to be deducted from the reading. The reading being in pounds and tenths of pounds makes the calculation very much simpler than when pounds and ounces are given, as on the ordinary Scale.

Price Postpaid

30-lb. Scale. Weighs by 1-20 lb. \$5 25 \$5 50
60-lb. Scale. Weighs by $\frac{1}{10}$ or 1-20 lb. 6 50 6 75
120-lb. Scale. Weighs by $\frac{1}{10}$ or 1-20 lb. 10 00 10 30

These same Scales can be furnished to weigh by ounces at the same prices.

Common Sense Milk Bottles

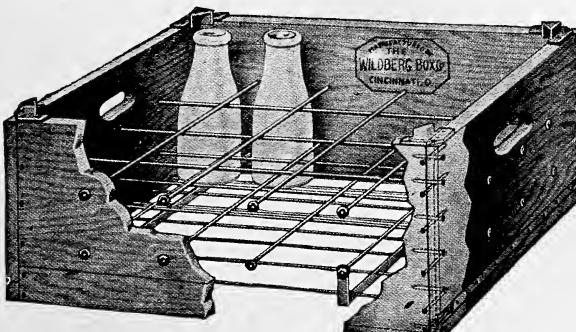
All bottles and capacity guaranteed to conform with state laws

These extra-heavy Milk Bottles are made in different shapes. We recommend the style S which shows deep cream line.

	Doz.	$\frac{1}{2}$ gross	Gross
Quarts	\$1 20	\$5 75	\$10 50
Pints	1 00	5 00	8 75
Half-pints	90	4 50	7 65
Quarter-pints	90	4 50	7 65

Five gross lots 75c. per gross, 10 gross lots \$1 per gross and 25 gross lots \$1.25 per gross, less than above prices.

Name Plates \$2.50 for each size. Plates free on orders for 25 gross of one size. Orders for lettered Bottles must be for one gross or more of each size. All lettered Bottles f. o. b. factory. Freight allowed on orders of 10 gross or more. Plain Bottles f. o. b. cars, Pittsburgh.

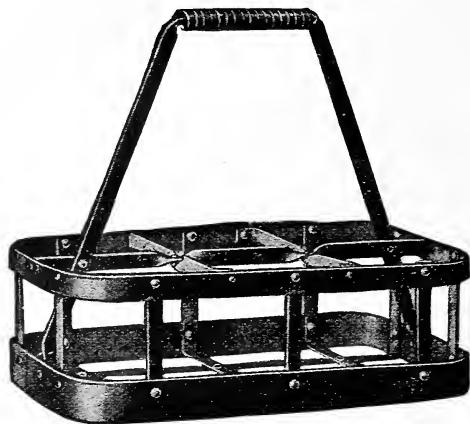


Sanitary Wire Bottom Bottle Cases

The No. 12, 12-quart Case is spaced three bottles wide and four bottles long. Is well made with corner irons, with all wires riveted, making a good, substantial, durable, as well as sanitary Crate at a reasonable price. The ends and sides are of hardwood with neat hand holes. The No. 20 Case holds twenty pint bottles, four bottles wide by five long. The width and length of this Case are the same as the No. 12 quart Case and will stack one on the other, each Case being held in proper position by the corner irons.

C12. Quart Case.	12 bottles; depth $10\frac{1}{2}$ inches, width $14\frac{1}{4}$ inches, length $18\frac{1}{2}$ inches.	....	\$2 10
C20. Pint Case.	20 bottles; depth $8\frac{1}{4}$ inches, width $14\frac{1}{8}$ inches, length $18\frac{1}{2}$ inches.	....	2 10
A16. Pint Case.	16 bottles; depth $8\frac{1}{4}$ inches, width $14\frac{1}{8}$ inches, length $18\frac{1}{2}$ inches.	....	2 20

Special Prices on Large Quantities



Perfection Milk Bottle Basket

Perfection Baskets are made up of plain annealed bands. They have extra-heavy top and handle, made to last a lifetime.

	Each	Doz.
6-pint.....	\$1 25	\$13 00
8-pint.....	1 35	15 00
6-quart.....	1 25	13 50
8-quart.....	1 35	15 50



Plug Milk Bottle Caps

These Caps are made from the very best grade of 35-point spruce-sulphite pulp board and are odorless and tasteless. A pure white paraffine is used for water-proofing them. The ink used for printing these Caps is especially manufactured for this purpose and will not spread or fade if bottles are submerged in water.

Printed in Red, Blue, Green, Black, or Brown. No charge made for special printing in one color in quantities of 50,000 or over.

If some special design or trademark is wanted a small charge will be made for the engraving. This expense, however, is charged on the first order only, and the design can be used by the purchaser on all future orders. We will furnish samples showing the different styles of printing on request.

PRICES

	Postpaid
No. 2 Caps. 525 in tube.....	\$0 45 \$0 55
No. 2 Caps. 1,000 in pkg.....	65 75
No. 2 Caps. 5,000 in box.....	2 75 3 00
No. 2 Caps. 50,000 in barrel, f. o. b. factory.....	21 50
No. 3 Caps. 1,000 in pkg.....	70 80
No. 3 Caps. 5,000 in box.....	3 00 3 25

Special prices will be quoted on large quantities of tube Caps for use in capping machines. Tube Caps are made from 40-point board.

Owing to the frequent changes in prices of raw materials from which these Caps are manufactured the above prices are subject to change without notice.

The Certified Milk Bottle Caps

The best pull Cap on the market. Made of 35-point board. Per tube (450 Caps), 65 cts., postpaid 75 cts.; 5,000 Caps \$4.75, ppd., \$5; 50,000 Caps in barrel, f.o.b. factory, \$43. Add 3 cts. per 1,000 to above prices for 40-point board.

Printing

All lots of 50,000 or more, will be printed in one color, either Red, Blue, Green, Black, or Purple, free of charge. Two colors, 2 cts. per 1,000 extra.

All lots under 50,000 (for which we do not hold an electro) will cost \$1.50 for the electro. No charge on repeat orders from these same electros, in any quantity.



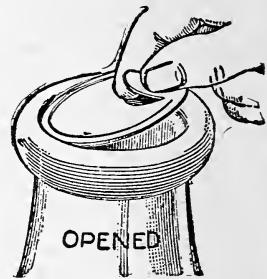
Perfection Pull Caps

Made of 40-point board, well paraffined.

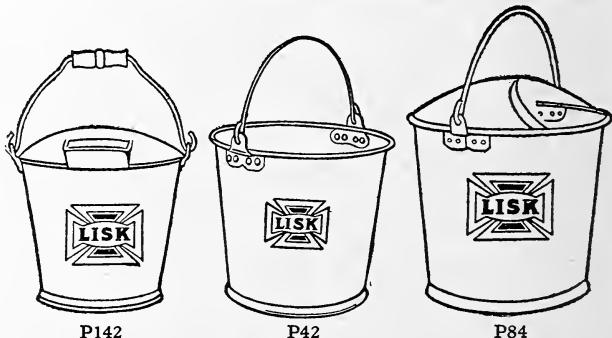
Postpaid
5,000 in box..... \$3 50 \$3 75
50,000 in barrel, f. o. b.

factory..... 25 00

All lots of 50,000 or more will be printed in one color, either Red, Blue, Green, Black, or Brown, free of charge. Printed in two colors, 2 cts. per 1,000 extra. No charge made for special printing in quantities of 50,000 or over.



Prices on Milk Bottle Caps are subject to frequent changes, higher or lower. If prices are higher at date order is received, customer will be notified before shipping; if lower, difference will be refunded.



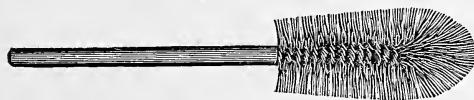
Anti-Rust Dairy Pails

Complying with Sanitary Dairy Laws of Various States

P42.	14-qt. Steel-clad XX Charcoal plate, plain bail.....	\$1 85
P52.	14-qt. Ironclad XX Charcoal plate, plain bail.....	1 00
P142.	14-qt. Plain XX Charcoal plate, wood bail.....	1 60
P84.	14-qt. Fishmouth XX Charcoal plate, plain bail....	2 35

Brushes for the Dairy

Hand Bottle Brushes



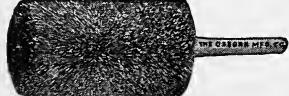
No. 86. Pure bristle; large size; $\frac{1}{2}$ -inch diameter, maple handle, 10 inches long. 50 cts., postpaid, 55 cts.; doz. \$5.50.



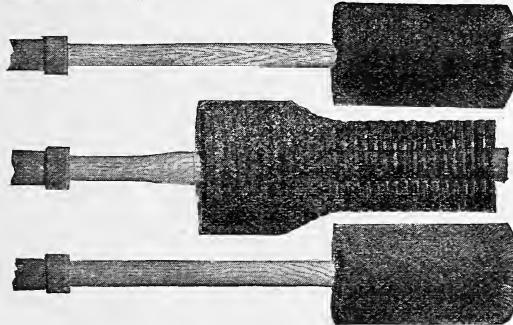
No. 72. 50 cts., postpaid 55 cts.; doz. \$5.50.



No. 124. 40 cts., postpaid 45 cts.; doz. \$4.25.



For Machine Washer
No. 121. Turbine. 50 cts., postpaid 55 cts.; doz. \$5.50.



No. 100. Center Brushes for cleaning outside of bottles. \$1; postpaid, \$1.10.

No. 101. Outside Brushes for cleaning inside of bottles. 65 cts.; postpaid, 70 cts.

Complete Set of 3 Brushes, \$2; postpaid, \$2.15



Palmetto Milk Can Brush

No. 08. Palmetto fibre; solid block $6\frac{1}{8}$ inches long; face $9\frac{1}{2} \times 5\frac{1}{2}$ inches. Made of an excellent grade of durable fibre, very full, with flaring wings. 50 cts., postpaid, 60 cts.; doz. \$5.25.



Genuine African Bass Stable Broom

No. 0286. Solid block; length of stock, $5\frac{1}{4}$ inches clear; four rows, 14 inches long, complete with handle. \$1.10; postpaid, \$1.35.

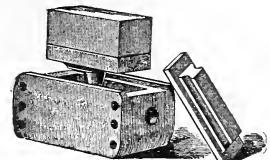


No. 500 Stable Broom

No. 500. Similar to No. 0286, with five rows instead of four; complete with handle \$1.35; postpaid, \$1.60.

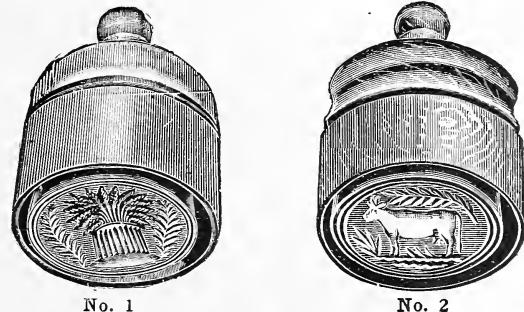
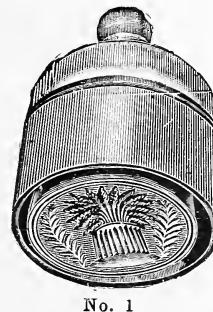
Pittsburgh Butter Mould

It is a very convenient shape and makes a nice-looking print, desirable for the market, and is being adopted in other sections of the country by butter-makers and packers for shipping purposes.



PRICES

	1/2-pound	1-pound	2-pound	Postpaid
	\$2 25	2 75	4 00	\$2 35
				2 90
				4 15

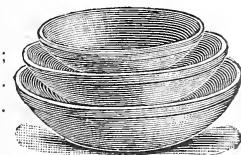


Round Butter Moulds

These Moulds are made of the finest selected sugar maple, thoroughly seasoned, hand carved, and are a strictly first-class Mould. Made in 1-pound size.

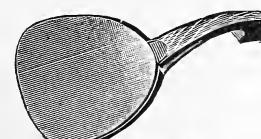
No. 1. Sheaf Design. 50 cts.; postpaid, 60 cts.

No. 2. Cow Design. Our new "Jersey Cow" Mould is a very handsome design and is an artistic piece of carving. 50 cts.; postpaid, 60 cts.



Maple Butter Bowls

Paraffine wax finish. Extra deep; heavy rimmed; nicely polished. 15-in. diam. \$1, 17-in. \$1.75, 19-in. \$2, 21-in. \$2.50.



Anderson Butter Ladle

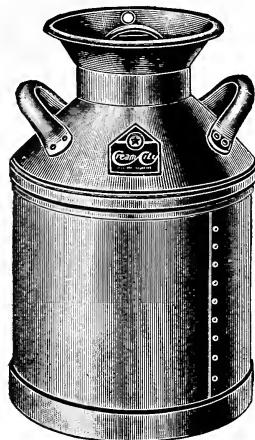
Made from white sugar maple. 25 cts.; postpaid, 30 cts.



Churn Thermometer

No. 2103. Glass cylinder; mercury filled tube; accurate, within one division of the scale; $7\frac{1}{4}$ inches long. 50 cts.; postpaid, 65 cts.

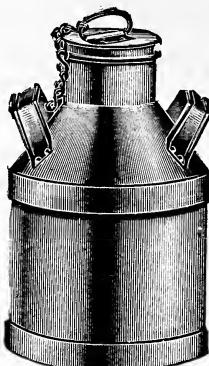
Cream City and O. M. Milk Cans



CREAM CITY

Extra-heavy seamless steel bottom, heavily coated with pure tin.

	Each	Doz.
5-gallon	\$3.00	\$32.50
8-gallon	3.50	38.00
10-gallon	3.75	40.00



O. M. PITTSBURGH

Lower and wider than Cream City Can. 1½-inch steel bottom; hoops firmly riveted to the lower edge of body. 5-gal. \$3.90 each, \$42 per doz.



O. M. RAILROAD

Heavy hoop style; made in four sizes. Each Doz.

½-gallon	.....	\$1.00	\$11.00
1-gallon	.....	1.50	16.00
2-gallon	.....	2.00	22.00
3-gallon	.....	2.75	30.00

Name-Plates for Milk Cans

Plates with name and address extra—less than dozen, 25 cts. each; dozen and upwards, \$2.75 per doz. Half-dozen cans at dozen rate.



P-2408 P-2412



P-2308 P-2312

Lisk Anti-Rust Milk Cans

Made from finest charcoal plate; seamless cover and neck. Bottom reinforced with steel pin. Heavy steel bail. Sanitary soldered. Full capacity.

	Each	Doz.
No. P-2308. Capacity 2 gallons	\$2.00	\$21.50
No. P-2312. Capacity 3 gallons	2.80	30.00
No. P-2408. Capacity 2 gallons	2.25	23.75
No. P-2412. Capacity 3 gallons	3.25	35.00

Half-Dozen Cans at Dozen Rate

Milk Strainers

No. A-1934. Anti-rust; seamless; sanitary soldered with adjustable steel band for cloth. \$1.25; postpaid, \$1.50.

Pittsburgh. Same style as A-1934. Fitted with hoop for cloth. For Pittsburgh and Cream City Pattern Cans; heavy bright tin. Size 10¼-inch top, 4¾-inch bottom, height 7¼ inches. 75 cts.; postpaid, \$1.



A-1934

"Pioneer" Brand Parchment Paper

This genuine Vegetable Parchment Paper is guaranteed to contain no oil, grease, paraffine, or wax. It makes the best package in which to deliver butter, cheese, lard, smoked, salt or fresh meats, fish and other products.

	Postpaid	Postpaid
1,000-sheet boxes, 8 x 11 inches	\$2.00	\$2.15
1,000-sheet boxes, 9 x 12 inches	2.40	2.55

Special prices on larger quantities

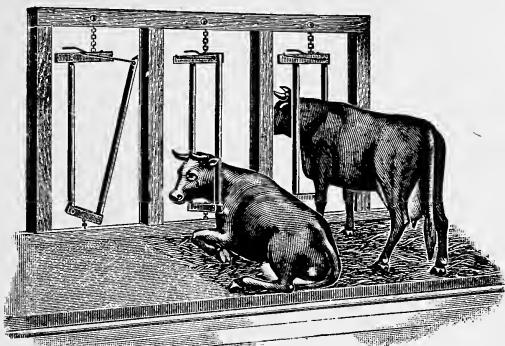
Dandelion Brand Butter Color

Have your butter uniform in color in June and in January. Give butter the "high price" shade uniformly—the year round. Practically every large creamery in the country uses Dandelion Brand Butter Color, which proves it is kept up to the highest standard of quality. Dandelion Brand Butter Color gives to butter that pleasing tinge of yellow which so closely resembles the natural June shade of butter, and enables the buttermaker to find a ready market at top prices. It is purely vegetable and meets the full requirements of all food laws, State and National.

	Postpaid
Small Size	\$0.35
Medium Size	65
Large Size	1.00

Butter and Egg Carriers for Parcel Post

For description and prices on these see page 169



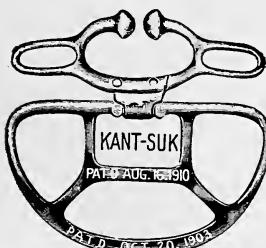
The Cattle Comfort Steel Stanchion

These Stanchions are made entirely of spring steel, the uprights being of smooth tubing, easy for the cows' shoulders and neck and the horizontal pieces of superior rolled angle steel driven to the tubing by strong rivets. They are hung at the top and bottom by heavy chains, which allow stanchions to swing, giving cattle perfect freedom and are quickly adapted to old stables as they are standard size and fit the same space occupied by the rigid Stanchions. Cattle can turn their heads, lick their sides, and, being more comfortable, they will give more milk. The Stanchions open and close quickly with one hand only, will not bend or break and are always in working order. They are sanitary as there is not an ounce of wood to absorb odors and moisture. They keep the cows clean, as wooden Stanchions do not.

PRICES F. O. B. PITTSBURGH

Less than 1 dozen, each.....\$3 75
1 dozen and upward, each.....3 50

Prices on complete stalls including stanchions, arched partitions and all fittings necessary to set up and install will be quoted on request.



"Kant Suk" Calf and Cow Weaner

Being made with a hinge joint, it swings out of the way when the calf eats or drinks, but effectually prevents sucking. It is heavily tinned, sanitary, and humane.

Postpaid
No. 1055. Calf size. \$0 50 \$0 60
No. 1056. Cow size. 60 70

Common-Sense Calf-Feeder

The Common - Sense Calf-Feeder is a simple, practical device which every calf-owner will appreciate and the value of which can be seen at a glance. The calf sucks his food in a natural manner, and the milk is taken into the stomach without having it form a solid, cheese-like, indigestible lump, which is frequently the case where the calf drinks directly from the pail.

Postpaid

Single Feeder.....\$3 00 \$3 15
Double Feeder.....4 00 4 15



Pilling Teat Opener

The Pilling Teat Opener differs from the Bistoury inasmuch as the Opener is simply used as a reamer or dilator to pass the obstruction. It does not cut the obstruction as the Bistoury does. 75 cts.; postpaid, 80 cts.

Pilling Hard-Rubber Teat Plug

The Pilling Hard-Rubber Teat Plug is especially designed to prevent dropping of milk in cows where there is a relaxation of the little muscle at the end of the teat and consequent leakage of milk as soon as enough pressure accumulates in the udder; also to dilate the canal of the teat above the muscle in cases where hard milking is due to contraction of this part of the canal. 50 cts.; postpaid, 55 cts.



Pilling Teat Expander

The Pilling Teat Expander, of metal, nickel plated, is intended to expand and enlarge the opening of hard-milking teats. It also expands the milk canal at the same time. Easy to use. 50 cts.; postpaid, 55 cts.



Pilling Milking Tubes

For Sore and Obstructed Teats and Hard-Milking Cows

Can be made any length by moving the adjustable slide; can also be used for a probe to pass the obstruction.

PRICES

				Postpaid
2 1/4-inch.....	\$0 65	\$0 70	3 1/4-inch.....	I 10 I 15
2 3/4-inch.....	80	85	4 1/4-inch.....	I 25 I 30

Prices quoted on other Pilling Cattle Instruments on request. Send for booklet.

"Pierceeasy" Bronze Bull Ring

This is "the Ring with a point." It cuts a clean hole and is made in three sizes.

		Postpaid
No. 1. 2 3/4 x 5/16 in. . . .	\$1 50	\$1 55
No. 2. 2 7/8 x 3/8 in. . . .	I 75	I 80
No. 3. 3 1/4 x 7/16 in. . . .	2 00	2 05



"Bullchane" Pacifier

If you own a bull that's at all hard to handle, you need Wagner's "Bullchane" Pacifier. Subdues most vicious animal without any harmful effects whatsoever.

Cannot twist because it has swivels every 2 feet. Snaps in nose ring and makes finest kind of "hitch" or leader. Strong and long-wearing—and just heavy enough to effectually "tame" the ugliest animal. A boon to stock raisers. \$1.75; postp'd, \$1.85.

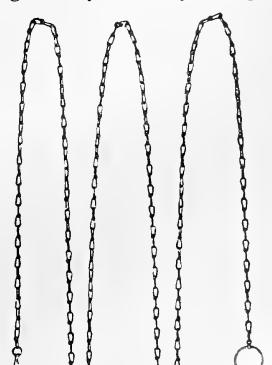


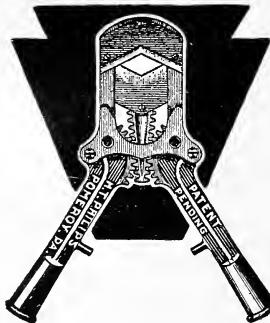
Tie-Out Chain

Our Tie-Outs are all made with large swivel malleable iron stake ring, swiveling snap, and a swivel every 10 feet.

20-ft. Chain, 75 cts.; postpaid, 85 cts.; 30-ft., \$1; postpaid, \$1.10.

Each Tie-Out Chain is packed in a neat and substantial bag.





The Improved Keystone Dehorner

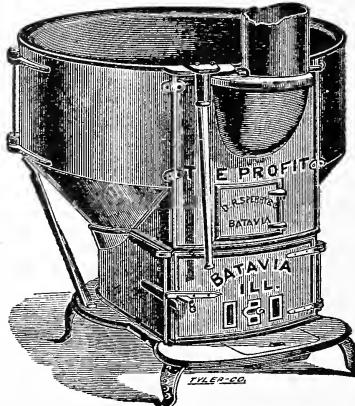
The Improved Keystone Dehorner is the latest and most efficient dehorning knife on the market today. It has been altered and improved in several important points of construction, until its strength, cutting service and durability have been greatly increased.

The illustration shows these points. Note that the rack has been made tapering and handles have correspondingly eccentric gears. This gives the knives their greatest cutting power at the beginning of the stroke, when it is needed, to drive through the hard outer coating of the horn. This feature alone makes the Keystone Improved far superior to all other Dehorners.

Note also that the outer edge of the cutting knife is pointed and its surfaces are parallel to those of the cutting edge. This makes the knife stronger and less liable to crack. Other Dehorners have straight knives that break easily under great strain.

The entire instrument is lighter, stronger, and better proportioned than former Dehorning knives. We guarantee it to be a first-class device in every way, and should any part break during the first year of use, we will furnish repairs free of charge. Complete with leader, rope, extra set of blades and screws, \$18; postpaid, \$18.50.

Special Circular Sent on Request



The Profit Farm Boiler

It is a simple furnace with a caldron which dumps. The contents can be emptied in one minute, doing away with the slow and disagreeable task of dipping it out. It is thoroughly constructed of the best cast iron. The kettle is cast very smooth and has an extra thick bottom.

PRICES

No. 25. 25 gal.; weight 275 lbs.; for coal.....	\$41 00
No. 250. 25 gal.; weight 275 lbs.; for wood.....	41 00
No. 48. 48 gal.; weight 410 lbs.; for coal.....	60 00
No. 480. 48 gal.; weight 410 lbs.; for wood.....	60 00



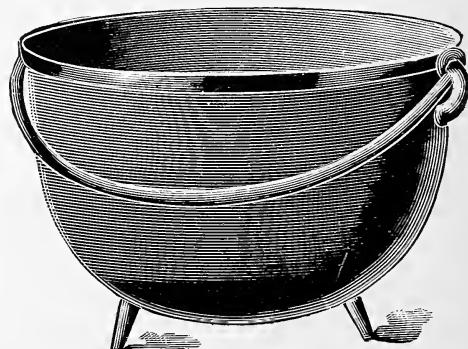
Solon Steel Boiler

This furnace and caldron is designed to meet the wants of farmers, butchers, contractors, and others who want something good, as well as low priced. It is, nevertheless, a good practical apparatus. It is supplied with our regular caldrons, which are unrivaled for fine finish and durability. The jacket or shell is made from heavy sheet steel, with edges banded, and has no bottom, as the stove is intended to be used on the earth, or to be filled with brick or clay up to the bottom of the feed door. It is provided with double doors so that it can be conveniently used as a coal burner when supplied with coal fixtures.

Three sizes, heavy steel shells, large double doors, Sperry's Perfect Caldrons. Capacity guaranteed. Don't confound this boiler with those of similar construction made from stove-pipe metal.

PRICES

	With Wood Fixtures	With Coal Fixtures
No. 1. 25 gal.; weight 165 lbs.....	\$21 00	\$28 00
No. 2. 33-gal.; weight 190 lbs.....	25 00	32 00
No. 3. 40-gal.; weight 225 lbs.....	27 00	34 00



Sugar or Wash Kettle

Our Sugar Kettles are full measure, with bails, milled and painted, holding the exact amount they are rated. Many sugar kettles and caldrons are sold by copying our list and giving fictitious measurements. When you compare prices, see that capacity is as represented.

PRICES

Actual Measure	Inside Diam	Depth	Usual Rating	Weight	Price
10 1/2 gals.	.18-in.	.12 in.	.13 gals.	.32 lbs.	.... \$5 00
15 gals.	.20 1/4-in.	.13 1/2 in.	.18 gals.	.40 lbs.	6 50
18 1/4 gals.	.22-in.	.13 3/4 in.	.20 gals.	.56 lbs.	8 00
21 1/2 gals.	.23-in.	.14 3/4 in.	.25 gals.	.60 lbs.	9 00



Disinfectant for Live-stock, Poultry and Barns (NOT A POISON)

B-K stands in a class by itself as a powerful, safe, inexpensive farm disinfectant and antiseptic. It has all the strength necessary to kill germs and protect animals against diseases. It has over ten times the germ-killing strength of carbolic acid and contains no acid, oil, coal-tar, or color. It is used by the leading breeders and dairymen and was awarded blue ribbon and gold medal at the Panama Exposition.

Reasons Why B-K is Protection Against Animal Diseases

Powerful Germ-Killer. Tested by the U. S. Hygienic Laboratory Method of testing disinfectants, B-K is possessed of many times the germ-killing strength of most disinfectants ordinarily used. It has ten times the germ-killing power of undiluted carbolic acid; also many times that of the ordinary coal-tar dips, such as cresol and the various combinations of cresylic acids, most of which are poisons and are irritating.

Safe for Internal Use. B-K contains no poison, acid, or oil—may be safely used internally according to directions. B-K is fed in the drinking-tank. Makes prevention of disease much more effective.

B-K Ideal for Vaginal and Uterine Injection. The vagina and uterus contain quantities of mucus and slime of the nature of albumin. Germs develop and thrive in this albuminous matter. B-K promptly dissolves all this matter, gets right at the germs, destroys and dissolves them; also dissolves and removes any diseased tissues with which it comes in contact, leaving the living tissues clean and inducing prompt healing of lacerations. It does not cause straining.

Clean to Use. B-K is clean as water, is an active cleanser, keeps hair and skin of animals clean and bright, removes stains from the hair, is cleansing and beneficial for the hands of workmen, healing and soothing to the flesh.

Wyandotte Cleaner and Cleanser

Wyandotte Dairyman's Cleaner and Cleanser is used in all dairy countries of the world, and in the United States and Canada 85 per cent of the butter- and cheese-makers use it daily. To this large number can be added the thousands of farmers, dairymen, and milk dealers who are steady patrons.

It contains no soapy grease, makes no soapy suds, nor resembles soap agents in any way. It is a sanitary cleaner made purposely to do the work of cleaning milk utensils and containers.

PRICES

	Postpaid
5-lb. sack.....	\$0 50
80-lb. keg (bulk).....	5 50
280-lb. bbl. (bulk).....	15 75

Shoo-Fly

"REGISTERED TRADE MARK"



THE ANIMALS' FRIEND

Shoo-Fly is an insecticide, germicide, anti-septic and disinfectant, being a liquid compound (free of water or gummy substances) absolutely harmless to man or beast and exceedingly obnoxious to flies and insect-pests. Not objectionable to man. Cures all sores from bottom, without much scab. Kills all lice and mites in poultry house or wherever sprayed. No flies, warbles, mosquitoes, Buffalo gnats, ticks or vermin on horse or cow, and one-third more milk where Shoo-Fly is sprayed. Thousands of testimonials.

Postpaid
Quart can.....
Gallon.....
5-gallon can.....

As a cleanser. B-K is a real cleanser. It does not take the place of soap and washing powder, but begins where the soap and soap powders leave off, and completes the job by removing the thin film that harbors germs and bacteria and destroying them.

Leaves no Odor After Use. B-K purifies the air and all surroundings—destroys odors, leaves everything fresh and inviting.

B-K is Cheap to Use. Diluted per directions according to the purpose of use. One gallon of B-K makes 128 to 400 gallons of effective dilution ready to use.

For Cattle. Use B-K for all disinfecting and for treatment of Abortion, Retained After-birth, After Calving, Sterility, Calf Scours, Ringworm, Cuts and Sores, Thrush, Pinkeye, and Scab.

For Poultry. Use B-K for disinfecting coops, incubators and brooders and for cases of Roup, Canker, Catarrh, Lice and Nits. Deodorizes foul-smelling coops, leaves no odor.

For Foul Brood in Bees. Effective in cleaning up this disease. Destroys the cause and stimulates the colony to normal activity.

PRICES

Quart. Farm Package.....	\$1 25
Gallon.....	3 00
5 Gallons.....	12 50

SEND FOR THESE FREE BULLETINS

No. 269, "General Disinfecting;" No. 317C "145 Farm Uses;" No. 147, "Hog Sanitation"; No. 52K, "Contagious Abortion;" No. 136G, "Calf Scours;" No. 213, "Good News for Poultry Raisers."

Conkey's Fly Knocker

Every stockman, every dairymen needs Fly Knocker. Don't let flies torment your horses; don't let them worry your cows. Cows give more milk and butter-fat and horses work easier when you save their energy by keeping off those winged pests.

Postpaid

Quart.....	\$0 60	\$0 70	Gallon.....	\$1 50
2 quarts.....	90	1 00	5 gallons.....	7 25



Sal-Vet

(MEDICATED SALT)

This is composed of sulphate of iron, sulphur, quassia, gentian, carbonized peat, charcoal, epsom salts, and tobacco coated on grains of salt, by a special process. Salt provides the "voluntary feeding principles." Farmers should salt their stock with Sal-Vet, thus giving them the medication to keep out worms, strengthen digestion, and make more profit out of their feed. It is sold on a positive guarantee. A hundred testimonials right from his own neighborhood will be mailed to any farmer on his application.

Postpaid

5 lbs.....	\$0 60	\$0 70	50 lbs.....	\$4 00
15 lbs.....	1 50	1 75	100-lb. keg.....	6 75
40 lbs.....	3 25			

Cows' Relief

Cows' Relief is one of the greatest remedies ever compounded for cattle and is worth its weight in gold to the farmer or dairyman, as it is a specific remedy for all bag and teat troubles.

PRICES

Small size. 60 cts.; postpaid, 65 cts.
Large size. \$1.20; postpaid, \$1.30.





Kow-Kare

Same as Kow-Kure

The great cow medicine for abortion, barrenness, scouring, bunches on the udder, red water, and "off feed." Kow-Kure assists nature, makes pure blood, corrects stomach disorders, improves appetite, and being a safe and powerful tonic, makes a larger flow of milk.

PRICES

Small Size.....	\$0 65	Postpaid
Large Size.....	1 25	
Half-doz. Large Size for \$6.75		

Corona Horn Preventive

For applying to horn nubbins on calves before ten days old.

Per bottle. Enough for 12 calves	\$0 50	\$0 55	Postpaid
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Blackman's Medicated Salt Brick

The Best and Most Convenient Stock Remedy Known

WHAT IT DOES

Aids digestion; removes worms; purifies the blood; cures skin diseases, kidney, stomach and bowel trouble; prevents colic, blind staggers, heaves, Texas fever, lamper, murrain; creates a healthy appetite; tones up the system; removes old coat of hair and brings out the new.

WHAT IT DOESN'T DO

Doesn't get old and wormy; doesn't lose strength with age; doesn't get eaten up by mice and rats; doesn't have to be hunted up and dosed out at feeding time (often in the dark) as do other remedies, for after being placed in the feed-box or holder it is always where stock can get it as they need it.

BETTER AND CHEAPER THAN STOCK POWDERS

Blackman's Medicated Salt Brick contains absolutely nothing but dairy salt mixed with sulphur for a blood purifier, copperas for worms and the bowels, saltpeter for the kidneys, and nux vomica, one of the best known tonics.

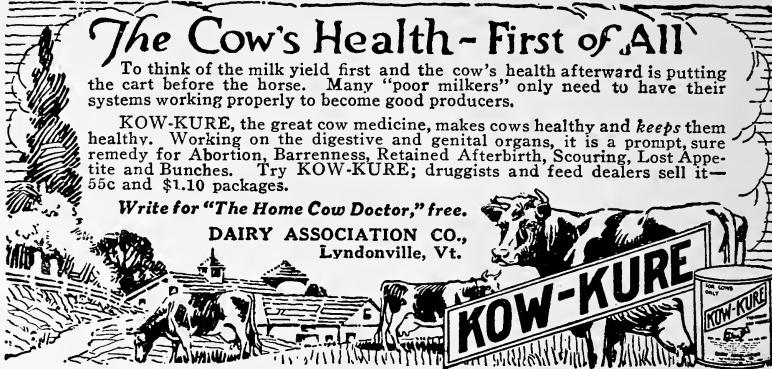
25c. per Brick, postpaid 30c.; doz. Bricks \$2.75, 2 doz. Bricks \$5.25

Bag Balm

We recommend Bag Balm for all diseases of udder and teats, caked bag, sore teats, bunches, chapping, cuts, inflammation, etc. It makes easy milkers of hard ones and keeps all the parts in a sanitary, healthful condition. 60 cts.; postpaid, 70 cts.

Calves' Cordial

One of the best remedies ever prepared for the treatment of scours in calves and cows, also a valuable remedy for stomach and bowel disorders. It acts as an astringent upon the digestive tract, soothing the inflamed tissues and removing the fevered condition. Large size 75 cts.; postpaid, 80 cts.



The Cow's Health - First of All

To think of the milk yield first and the cow's health afterward is putting the cart before the horse. Many "poor milkers" only need to have their systems working properly to become good producers.

KOW-KURE, the great cow medicine, makes cows healthy and *keeps* them healthy. Working on the digestive and genital organs, it is a prompt, sure remedy for Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite and Bunches. Try KOW-KURE; druggists and feed dealers sell it—55c and \$1.10 packages.

Write for "The Home Cow Doctor," free.

DAIRY ASSOCIATION CO.,
Lyndonville, Vt.



Corona Wool Fat

It will positively cure scratches, swollen tendons, relieve inflammation, and will grow a new and perfect hoof.

PRICES

8-oz. box.....	\$0 60	\$0 65	Postpaid
20-oz. box.....	1 20	1 25	

Dr. Hess Stock Tonic

2-lb. pkg.....	\$0 25	\$0 30	Postpaid
4 1/2-lb. pkg.....	50	60	
10-lb. pkg.....	1 00	1 25	
25-lb. bag.....	2 25		
100-lb. drum.....	8 00		

International Stock Tonic

3-lb. pkg.....	\$0 50	\$0 55	Postpaid
6-lb. pkg.....	1 00	1 25	
25-lb. bag.....	3 00		

Retsof Rock Salt

The genuine Retsof Rock Salt in lumps weighing from 5 to 15 pounds each. 50 lbs. \$1.35, 100 lbs. \$2.35, 280 lbs. (barrel) \$4.50.

Star Medium Dairy Salt

50 lbs. \$1.35, 100 lbs. \$2.25, 280 lbs. (barrel), \$3.60.

Get Rid of Your Rats

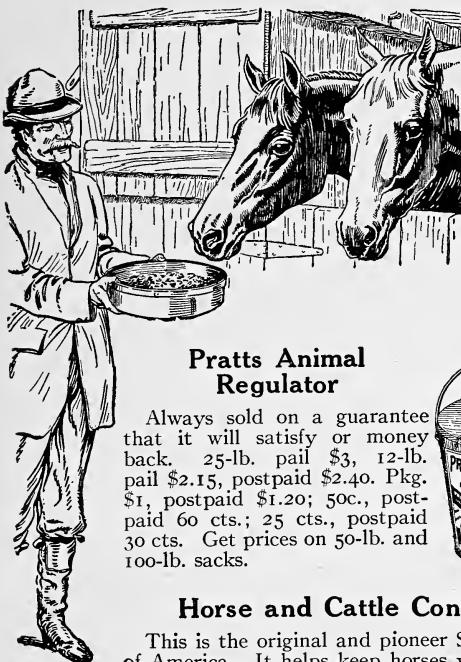
Rat Corn



THIS IS A RAT MUMMIFIED

It is not an experiment but, on the contrary, it is a thoroughly tried and proved destroyer of rats and mice. Its action on rats and mice is a rather peculiar one. Almost immediately after eating it they become stupefied, and they remain in this stupor until they die. Death occurs about ten hours after they have eaten the Rat Corn. Every rat that eats Rat Corn must die, and almost as soon as it dies, it becomes hard and dry—much like leather—and no matter how long it stays there will be no odor.

It is Sure Death to Rats and Mice. Rat Corn is not a deadly poison and therefore can be used without danger to human beings. Price per can, 25 cts., 50 cts., and \$1, postpaid.



Pratts Animal Regulator

Always sold on a guarantee that it will satisfy or money back. 25-lb. pail \$3, 12-lb. pail \$2.15, postpaid \$2.40. Pkg. \$1, postpaid \$1.20; 50c., postpaid 60 cts.; 25 cts., postpaid 30 cts. Get prices on 50-lb. and 100-lb. sacks.



Horse and Cattle Conditioner

This is the original and pioneer Stock Regulator of America. It helps keep horses well and strong, improve their wind, and make their coats sleek and glossy.

Helps Cows give more and richer milk, the percentage of butter-fat being increased, and their calves are stronger. Steers fatten in shorter time.

Hogs are raised and fattened more quickly and kept thrifty. Sheep are healthier and their meat and wool improved by its use. Test it on our guarantee to do the work or money refunded.

Pkg. 60 cts., postpaid 75 cts.; 12-lb. pail \$1.40, postpaid \$1.65; 25-lb. pail, \$2.50; 100-lb. drum, \$6.80



Pratts Veterinary Colic Preparation

It is a reliable treatment in cases of flatulent colic (sometimes called bloat), gas colic, and acute indigestion. Its action is quick. Keep a bottle handy.

Extra-large bottle \$1.50, postpaid \$1.60; small size 75 cts., postpaid 80 cts.



Pratts Fly Chaser

Give comfort to horses, cows and other live-stock in fly time by spraying them with Pratts Fly Chaser. It is guaranteed or money back. It has long efficiency, will not blister, remove the hair or damage the hide. Means safety for the milker. Does not taint the milk or gum the hair.

1/2gal. 85 cts., postpaid \$1; gal. \$1.35; 5 gals. \$5.85; 10 gals. \$11.30



Pratts Heave and Cough Preparation

60 cts., postpaid 70 cts.

Pratts Worm Powder

60 cts., postpaid 70 cts.

There is a Pratt Remedy for nearly every curable Stock disease—Guaranteed to satisfy or your money back

Pratts

Animal Regulator and Remedies

More work out of your horses, more milk from your cows, fatter hogs—these are a few of the benefits which will come from using



Pratts Dip and Disinfectant

An all-year round necessity on every farm and in every home. Kills many disease germs, insects and vermin on live stock, in barns, poultry houses, etc.

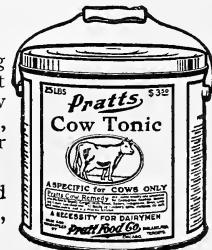
Qt. 55 cts., postpaid 65 cts.; 1/2gal. 95 cts., postpaid \$1.10; gal. \$1.60; 5 gals. \$7.35. Are you paying more for an inferior Dip?



Pratts Cow Tonic

Keep your cows thrifty while forcing milk production, without increased cost for feeding or care by giving them Cow Tonic. It promotes healthy appetite, good digestion, increased vigor, greater milk production.

60 cts. and \$1.20, postpaid 70 cts. and \$1.35. Also sold in 12-lb. tins at \$2.75, postpaid \$3; 25-lb. tins at \$5.



Pratts Healing Powder

A treatment for harness galls, sores, grease heel, bleeding ulcers, etc. It helps arrest hemorrhage and check blood flow. Dirt and dust cannot get into wounds, as the powder forms a coating over them.

30 cts., postpaid 35 cts.

Pratts Healing Ointment

Most injuries are healed naturally and permanently, and pain quickly relieved by applying Pratts Healing Ointment.

30 cts., postpaid 35 cts.



Pratts Liniment

For man or beast

Acts both as a counter-irritant, drawing out the inflammation, and also as a penetrant. Can be used either to blister or without blistering, by regulating the application.

To aid in the relief of rheumatism, lameness, sprains, bruises, contracted muscles, shoulder or stifle lameness, thrush or canker, cockle joints, sweeny, kicks, sore throat, curb, splint, capped hocks, shoe boils.

Bottles 35 cts., postpaid 40 cts.; 70 cts., postpaid 80 cts.; \$1.40, postpaid \$1.50



Semi-Solid Buttermilk

For Hogs, Calves and Poultry

KEEPES THE HOGS HEALTHY AND MAKES THEM GROW FAST

Buttermilk is Nature's cheapest and most valuable feed because of its high content of proteins, carbohydrates, lactic acid, butterfat, and mineral salts. These are the elements recognized by all authorities on feeding and proved, through long experience, by hog-raisers, to be the most valuable in increasing weight quickly.

Semi-Solid Buttermilk is pure, rich buttermilk with the water taken away. Raw buttermilk by analysis is about 93 per cent water. Semi-Solid Buttermilk, as the name implies, is a semi-solid concentrated or condensed buttermilk. In other words, it is fresh, wholesome buttermilk containing about 6 per cent lactic acid with all the feeding values that the richest buttermilk contains—with the water content taken away to save bulky handling and freight expense.

Semi-Solid Buttermilk is pure, fresh buttermilk direct from the creameries. Our patented process takes out the water and concentrates the high feeding values. It is sterilized, pasteurized, and boiled at low temperature. All bacterial growths are destroyed. A single barrel of Semi-Solid Buttermilk is equal in feeding value to a whole wagon load of raw buttermilk. It contains no fiber whatsoever and is 100 per cent digestible. No other hog-feed approaches Semi-Solid Buttermilk in feeding value as the actual analysis will prove. It materially aids the digestion of your other feeds.

500-pound barrel makes 1,000 gallons

For details regarding Semi-Solid Buttermilk as a poultry food see page 178. Ask for special circular and testimonials.

Blatchford's Pig Meal

THE PERFECT MILK SUBSTITUTE FOR YOUNG PIGS

Easily takes care of the weaning stage—the time when those little fellows need good care and the proper gruel to tide them over from the mother milk to coarser grain feed. Blatchford's Pig Meal is inexpensive, and a pound makes a gallon of gruel.

Bicorn Hog Feed

Bicorn is made out of standard Hog Feeds properly combined so as to save tankage and grain. It contains no roughage or low-grade products, hence its high efficiency, and is a complete feed for growing pigs.

For larger hogs (175 pounds and up), feed it with corn, hominy, or barley. Its ingredients are tankage, corn germ meal, wheat middlings, flour from wheat, corn rice and buckwheat, corn meal, oats, linseed meal, bone meal, gluten feed, and salt—nothing else.

Analysis: 17.5 per cent protein, 4 per cent fat, 6 per cent fiber.

"Hog Bon"

A Substitute for Tankage without Its Odor and at Half the Cost

Feeding Directions.—Mix thoroughly 5 pounds Hog Bon with 95 pounds of ground grains. Feed wet (slopped) or dry in feeders.

Hog Bon builds strong, big hogs, with large bone-frames, carrying lots of meat. It keeps hogs healthy and free of worms.

Darling's 60 Per Cent Protein Digester Tankage

Darling's Digester Tankage builds bone and muscle on young pigs, and matures a hog for market from two to three months earlier than corn alone. Hogs that are fed with it are better proportioned—more lean and less fat. They are sound, and ship well with surprisingly small shrinkage.

Unicorn Dairy Ration

A QUALITY FEED AT THE RIGHT PRICE

A complete grain ration suitable for any kind or breed of dairy cow.

A high-protein feed with a never-varying digestible analysis. Can be mixed and fed with corn, oats or hominy

Triangle Dairy Feed

A complete, well-balanced dairy feed. If your roughage is largely legume hay, you may, if you wish, feed Triangle with say, one-fourth home grain to three-fourths Triangle.

Blatchford's Calf Meal

Blatchford's Calf Meal is absolutely the only milk-substitute which contains all the elements the calf requires for rapid and healthy growth.

Blatchford's Calf Meal is the Original Calf Meal. It was the first on the market. For practically forty years it has been consistently used in the United States by a constantly increasing number of farmers and dairymen.

It is the only Calf Meal that is thoroughly cooked and prepared for digestion. It is easy to feed. Calves relish it.

It supplies in easily assimilated form all the food elements necessary for rapid growth, early maturity, thrift and health.

It is strictly a *quality* product. Only the very best materials are used in its manufacture.

Stock Feeds

We make a specialty of supplying our customers with high-grade stock feeds and concentrates of which the following is a partial list:

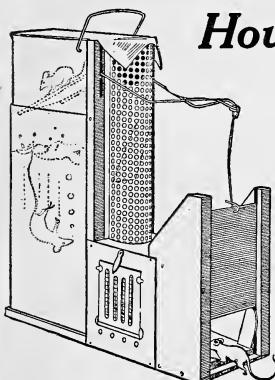
Buffalo Gluten Feed
Digester Tankage
Oil Meal, Old Process
Cotton Seed Meal
Flaxseed Meal
Whole Flaxseed
Alfalfa Meal

Dried Beet Pulp
Unicorn Dairy Ration
Triangle Dairy Feed
Blatchford's Calf Meal
Blatchford's Pig Meal
Blatchford's Lamb Meal

Special price-list sent on request

PEERLESS RAT AND MOUSE TRAPS

\$200,000,000 Worth of Foodstuffs Destroyed by Rats Annually



PEERLESS
AUTOMATIC MOUSE TRAP

Height, 10 $\frac{3}{4}$ inches; width, 4 inches; length 10 inches. Made of Wood, Galvanized Iron, Tin, and the Best Galvanized Wire Netting.

Price \$3 each, f. o. b. Pittsburgh

These are figures furnished by the U. S. Government. The rat population exceeds the human population in this country.

Did you ever stop to consider YOUR loss inflicted by the rats and mice harbored on your premises? It is estimated that a rat in the field, the house, the barn, or the store costs \$2 a year to maintain, and that there are as many rats in this country as there are men, women, and children. Then the unsanitary condition that they carry along with their constant destruction adds another stiff problem to your many others.

Get rid of these pests the effective "PEERLESS" way. It is not only the sanitary way, but also the rapid way of extermination.

The common brown rat breeds six to ten times a year, and produces an average of ten young in a litter. Young females breed when only three or four months old.

A few well-known users of PEERLESS Traps:

National Biscuit Co. Quaker Oats Co. Armour & Co.
Sprague, Warner & Co. Washburn-Crosby Co. U. S. Treasury Bldgs.
Albert Dickinson Co. Pillsbury's Flour Mills Booth Cold Storages

BACKED BY HUNDREDS OF TESTIMONIALS

PEERLESS Traps Reset Automatically after each catch

With these two traps you keep your premises free from these destructive and disease-carrying rodents. Every mouse or rat caught leaves a living scent behind him as he plunges into the water-tank, and resets the trap for the next victim. Hence the trap is "ever set," and "always set," and you get the rodents on their first visit to your place before they have a chance to breed and multiply.

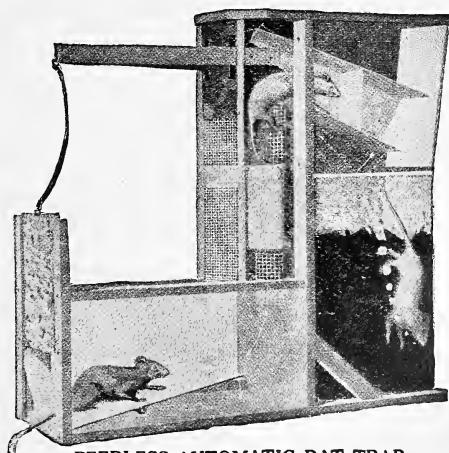
If you cannot tell from the illustrations how the Traps work, write for special circular.

THE FIRST COST IS THE LAST COST

I am enclosing herewith order for three dozen Peerless Mouse Traps. Some time ago we bought one dozen of your Peerless Traps and placed them in various parts of our building; the first week we caught 300 mice. We caught as high as 21 mice in one trap in one night.—SPRAGUE, WARNER & Co., Chicago, Ills.

COMBINATION OFFER.—We will deliver both Traps, freight prepaid, to your station for \$10.50.

"If a man can write a better book, preach a better sermon or make a better Mouse Trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."—HUBBARD.

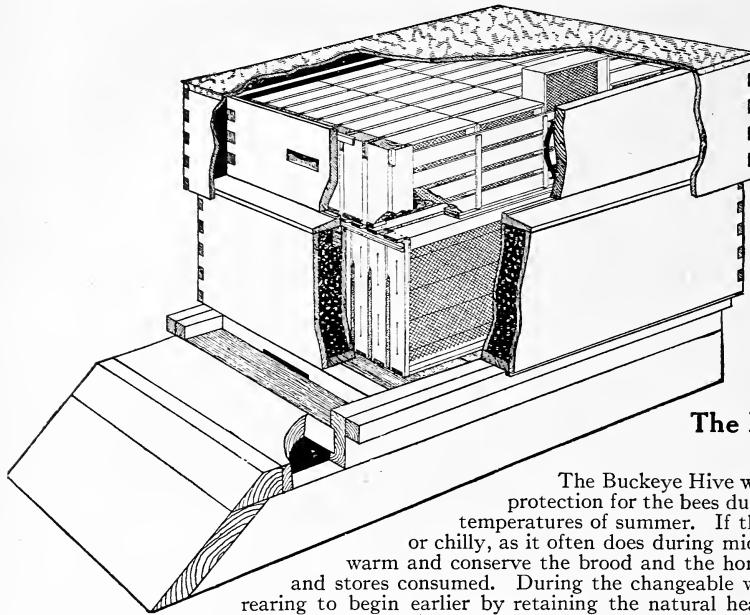


PEERLESS AUTOMATIC RAT TRAP

Height, 25 $\frac{1}{2}$ inches; Width, 7 inches; Length, 26 inches. Made of Wood, Galvanized Iron, Tin, and the Best Galvanized Wire Netting.

Price \$8.50 each, f. o. b. Pittsburgh

"We have used six of your mouse traps since the third of February and have caught 430 mice to date, and have caught as many as twenty (20) in one trap in twelve hours."—ZELT BROS., Ft. Wayne, Ind.



Root "Quality" Bee Supplies

Realizing that there are over 800,000 keepers of bees in this country, we appreciate that there must be quite a large number of our customers who are in the market for bee supplies from time to time. It is, therefore, with the purpose of making our service to those customers more complete that we are offering a complete line of such supplies as are put out by The A. I. Root Company, the recognized headquarters for articles of this character. We give below a list of a few of the articles we carry in stock, and if you fail to find just what you want write us for a copy of our large illustrated catalogue of bee supplies—it is free.

The Buckeye or Root Double-Walled Packed Hive—10-Frame Only

The Buckeye Hive was especially designed as a dual-purpose Hive, to provide protection for the bees during severe winter weather and for equalizing the extreme temperatures of summer. If the weather changes suddenly at night or if it turns cold or chilly, as it often does during midsummer, the double walls and the packing keep the bees warm and conserve the brood and the honey when otherwise some of the brood might be chilled and stores consumed. During the changeable weather of spring this Hive makes it possible for brood-rearing to begin earlier by retaining the natural heat of the bees, thus preventing the chilling of the brood.

Equipped with metal telescope cover, inner cover, chaff-tray, bottom-board, Hoffman frames.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
C221002	Buckeye Hive complete, no foundation.....	1 KD	45	\$6 50
C221003	Buckeye Hive complete, no foundation.....	5 KD	225	30 00
C221005	Buckeye Hive complete, full sheets foundation.....	1 NP	46	11 00

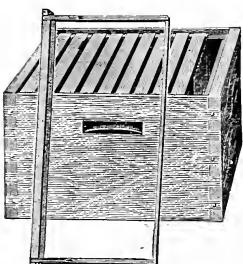
One-Story Standard Hive, with Metal Cover—10-Frame Only

This Hive is the one most generally used by the largest honey-producers on account of its light weight and the ease with which it may be moved from one location to another. It is of highest quality throughout, being made of best selected white pine, perfectly milled and fitted together.

This Hive is $16\frac{1}{4}$ x 20 inches, and $9\frac{9}{16}$ inches deep, outside measurements.

Hives in the flat are furnished with nails, tin rabbets, reversible bottom-board, metal cover, with inner cover, Hoffman frames.

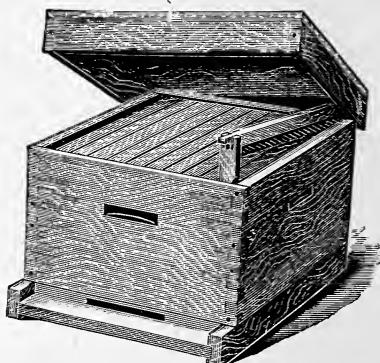
Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
C222002	Standard Hive complete, no foundation.....	1 KD	29	\$3 90
C222003	Standard Hive complete, no foundation.....	5 KD	145	18 00
C222005	Standard Hive complete, full sheets foundation ..	1 NP	31	7 30



Root Hive-Bodies—10-Frame

What is said about the Root Hive applies, of course, to Root Hive-Bodies. The Body shown in the cut at the left is the standard dovetailed Hive of Langstroth dimensions, 10-frame size, and measures $16\frac{1}{4}$ x 20 inches and is $9\frac{9}{16}$ inches deep. The Hive-Body may be used either as a brood-chamber, i. e., the lower story of the Hive, or as a full-depth upper story or super for extracted honey, thus forming a two-story Hive. Nails and tin rabbets included with bodies. No division-board.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
C242802	Standard Body with frames, no foundation.....	1 KD	14	\$1 80
C242803	Standard Body with frames, no foundation.....	5 KD	72	8 00



Shallow Extracting Supers (5 $11/16$ Inches Deep)

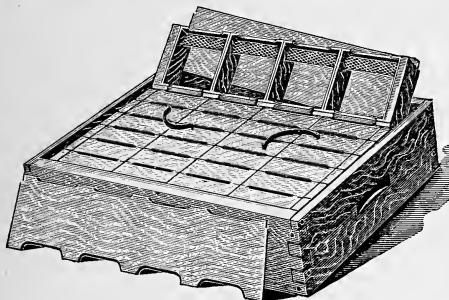
This Super is largely used in the production of chunk honey. It is also used for producing extracted honey in shallow frames, two of these frames fitting together in an extractor comb pocket of 12-inch width. Two of these Supers may also be used as one brood-chamber Hive, and any style of Super may be used above for comb or extracted honey. This Super is also used for section-holders holding 4 x 5 sections. This is our regular extracting Super, $5\frac{11}{16}$ inches deep, and is furnished with shallow Hoffman frames, $5\frac{3}{8}$ inches deep, without foundation. No tin rabbets or division boards furnished.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
C252202	10 Frame Super with shallow frames, no foundation.....	1 KD	8	\$1 20



Above prices do not include postage. For postpaid prices, use the weight given in connection with each article.

The rate is 6 cents for the first pound and 2 cents for each additional pound



Beeway Section Super (4 1/4 x 4 1/4 x 1 7/8)

This Beeway Section Super, 4 1/4 inches deep, is most commonly used. It takes slotted section-holders, slotted wood separators, follower, and springs, and is furnished with or without sections, and with or without inch foundation starters. It may be used on any of our single- or double-walled hives, tiered up one or more high.

After the Supers are filled, ready to be removed, a bee-escape board should be used to free the Super of bees.

Super complete without sections includes nails, flat tins, end-stops, super springs, slotted section-holders, slotted separators, and follower.

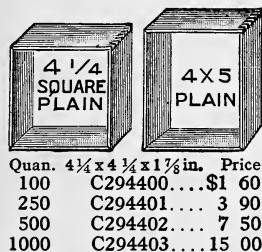
Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
C252402	10 frame super without sections or foundation.....	1 KD	7	\$1 10
C252403	10 frame super without sections or foundation.....	5 KD	35	4 75
C252404	10 frame super with sections, 1-inch starters.....	1 NP	9	2 30

Plain Section Super (4 x 5 x 1 3/8)

We recommend this Super in preference to any other comb-honey Super that we sell. It is a deeper Super (5 11/16 inches), and is fitted with section-holders and M fences with end stops and springs. The regular 16 1/4-inch ten-frame width will easily admit eight section-holders and eight fences with super springs.

Super complete without sections includes end-stops, section-holders, fences, super springs, flat tins, and nails.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
C252502	10 frame super complete, no sections or foundation.....	1 KD	9	\$1 75
C252503	10 frame super complete, no sections or foundation.....	5 KD	47	7 75
C252504	10 frame super with sections, 1-inch starters.....	1 NP	11	3 10



Section Honey-Boxes

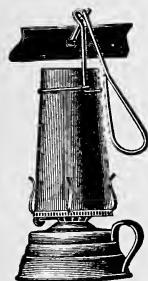
Our Honey Sections are high grade and of fine appearance, cut from clear basswood. They are smooth and highly polished. Sold only in full crates.

Quan.	4 1/4 x 4 1/4 x 1 7/8 in.	Price	Wt. lbs.
100	C294400.....	\$1 60	7
250	C294401.....	3 90	18
500	C294402.....	7 50	35
1000	C294403.....	15 00	70

Wt. lbs.	4 x 5 x 1 3/8 in.	Price	Wt. lbs.
7	C294430.....	\$1 45	6
18	C294431.....	3 50	15
35	C294432.....	6 75	30
70	C294433.....	13 50	60

Root Foundation-Fastener

The cut at the left shows the Root Foundation-Fastener with lamp. It is a very rapid tool and gives excellent results where a cheaper tool is wanted. C499250, Root Fastener with lamp, wt. 8 ozs., 60 cts. C499260, Root Fastener without lamp, weight 2 ozs., 20 cts.



Porter Bee-Escapes

In taking off honey the Bee-Escape is the greatest labor-saver ever invented. It frees the supers of bees so that no shaking of heavy supers or smoking is necessary. C452011, Porter double Escape without board, each 18 cts.; C262811, Porter board with double Escape, nailed, weight 2 lbs., each 60 cts.



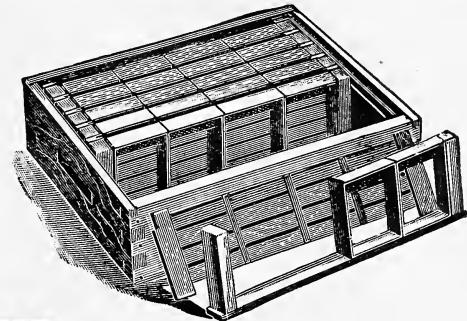
Spur Wire Imbedder

This is an excellent device for imbedding the wires of frames into the sheets of foundation. The teeth are broad and blunt so there is no danger of weakening the foundation. C499100, Spur Wire-Imbedder, weight 3 ozs., each 30 cts.

Wire for Frames

This Wire is used to hold foundation or combs securely in the frames, and at the same time reduce the danger of sagging. 670 feet are required for 100 Hoffman frames. C490613, 1/2-lb. spool tinned wire, 700 feet, each 25 cts.

Above prices do not include postage. For postpaid prices on mailable articles, use the weight given in connection with each article. The rate is 6 cents for the first pound and 2 cents for each additional pound



Comb Foundation

Genuine Airco Process Foundation, made into clear tough sheets from finest quality beeswax. Brood Foundation is cut in sheets size 7 1/8 x 16 3/4 inches; super Foundation sheets are 3 1/8 x 15 3/4 inches and 3 1/8 x 14 1/4 inches.

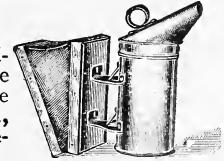
The package numbers in the following price list are for medium brood sizes 7 1/8 x 16 3/4, and for thin super sizes 3 1/8 x 15 3/4 only.

Medium	Per lb.	Thin	Per lb.	
1-lb. box	C511001.....	\$0 80	C535001.....	\$0 88
2-lb. box	C511002.....	77	C535002.....	85
5-lb. box	C511003.....	75	C535003.....	83



This Brush is made of genuine horse-hair bristles. It may be washed out repeatedly and will wear a long time. C200592, Bristle Bee-Brush with black bristles, weight 7 ozs., each 30 cts.

Bristle Bee-Brush



Smokers

The latest improved model has anti-spark tube, which provides a safe fire draft, has long-life flexible hinge, and wire handle, that is always cool. C462301, Standard Tin Smoker, with 3 1/4-inch firebox, weight 2 lbs., each \$1.30.

Queen Excluders

Queen Excluders are used to confine the queen to the brood-chamber, and are very generally used in the production of extracted honey. C452412, 10-frame 7-wire and wood, 16 1/4 x 20 inches, weight 3 lbs., 75 cts.

Root Bee-Veils

These Veils are made of the very best imported material and so constructed as to insure a perfect fit.

C200551	Veil, made entirely of silk tulle, weight, 2 ozs.	\$1 60
C200553	Veil, cotton tulle throughout, weight, 3 ozs.	1 10

Root Collapsible Bee-Hat

Designed especially for bee-keepers' use. C200550, Root Bee-Hat, weight 4 ozs., each \$1.



Our Poultry Supply Department

To Our Poultry-Supply Customers

1922 : THE OUTLOOK



ANOTHER year has slipped into the past and with it we trust many of the trying experiences through which we have been passing as a result of the World War. Whoever, or whatever we are,—farmers, poultrymen, dairymen, manufacturers, business men or wage earners,—we have had to "take our medicine" and now rejoice as we see normal times approaching.

So far as the poultry industry is concerned, there is every indication of a prosperous year just ahead, both for the regular and the backyard poultryman. Feeds are down to pre-war prices, equipment and supplies are down, but eggs and poultry are still high. They would be much higher were it not for the army of the unemployed, or only partly employed, who have to cut them out entirely or use them sparingly.

Production will have to be largely increased before we can expect lower prices, for we do love our "ham and—," "Bacon and—," fried chicken, etc., and will give them up only when we begin to "taste the silver."

In presenting our 1922 Poultry Supply Catalogue we wish to express to you our appreciation of your generous patronage of the past year. We assure you that your patronage is appreciated and we will do our utmost to merit a continuance of your trade.

When you are in Pittsburgh, don't forget to call at our store and look over our stock. While we carry the largest stock of Poultry Supplies and Feeds in Pennsylvania, we also have Bee Supplies, Dairy Supplies, all kinds of Garden and Farm Implements and Supplies, and Garden and Field Seeds of every kind.

PARCEL POST. On all mailable articles we have given "postpaid" prices, which apply to all places within 300 miles of Pittsburgh. Where "postpaid" prices are not given, the articles can be sent only by express or freight at the expense of the purchaser. In ordering, always state how goods are to be sent, by Parcel Post, Freight, or Express.

OUR MONTHLY FEED PRICE-LIST. Owing to the fluctuations in the prices of grains and feeds we do not give prices on feeds in our catalogue. Our Monthly Feed Price-List, copy of which accompanies this catalogue, is revised on the first of each month, and will be sent free on request.

INDEX ON THIRD COVER PAGE

Incubators and Brooders

The Incubators and Brooders offered in the following pages have been selected for their proved efficiency as hatchers and chick-raisers. They are the products of the oldest and most successful manufacturers—the pioneers who blazed the way and by their untiring efforts have made artificial incubating and brooding the great success they are today.

We have space for but meager descriptions in this catalogue but will mail a complete catalogue of any particular line on request.

The Prairie State Sand-Tray Diffusion Incubators

Prairie State Incubators were the first uniformly successful Incubators on the American market. They are of the hot-air type and have incorporated in their design the three essential principles which originally distinguished them in the first year of their construction (1881)—top-radiant heat, down-draft ventilation, and applied moisture.

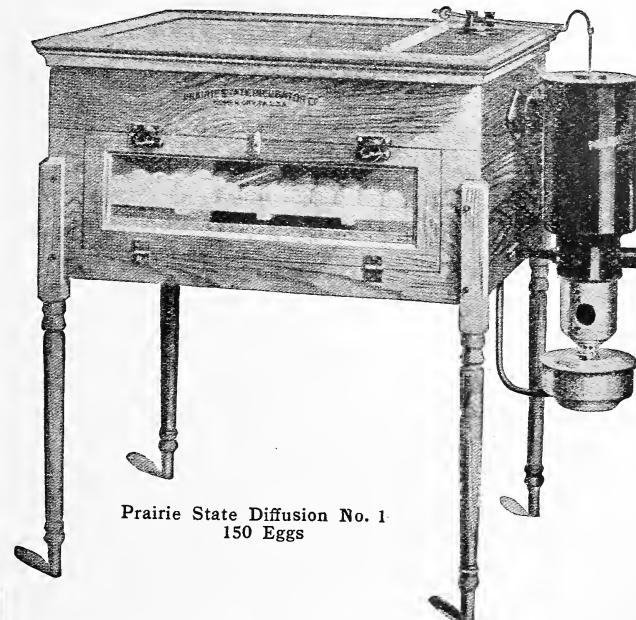
Prairie State Sand-Tray Diffusion Incubators, having for eleven years been the criterion of modern incubator construction, the 1921 models are presented unchanged in principle, more perfect in minor details than ever before, fully warranted as to materials and construction, and prepared to maintain the Prairie State lead in unexcelled hatching efficiency.

Description. The case is double, consisting of outer case, built of cypress—the most durable wood known under all conditions of climate and atmosphere—and an inner case, or egg-chamber, of soft tongued and grooved lumber. The space between is entirely filled with cotton batting, making perfect insulation, and saving oil consumption by retaining heat. Outer case is twice sanded and shellacked, finished with high-luster varnish, and in appearance the Incubator may stand beside high-grade household furniture.

The heater is of new design, regularly examined and labelled under supervision of Underwriters' Laboratories. Every Prairie State Incubator is insurable. The lamp-case is integral with the heater, the whole in one piece, and has conical bottom, making lamp self-centering. Lamp is of galvanized steel, with Miller Sun Hinge burner, guide-ring, and self-centering metal chimney. Entire heater is strong, gas-tight, and fool-proof.

The Prairie State Eddy-Current Distributor, patented, located at top of egg-chamber, breaks up the heated air-current as it enters the machine, and distributes heat to all parts by eddy-current. Distribution is automatic and self-evening, insuring uniform heat under wider ranges of outside temperature than under any other system. No sloping or bagged egg-trays necessary. No faulty distribution or hot centers.

The regulator consists of zinc and steel thermostat, strong and sensitive, operating by positive thrust the lever-bar on incubator top which raises and lowers the heater exhaust valve. Temperature is controlled within a fraction of one degree. Thermostat is



Prairie State Diffusion No. 1
150 Eggs

located above egg-level, and upon its center line absolutely uniform temperature is maintained, regardless of outside weather.

Ventilation is positive and free, effected by combining heating and ventilating currents, by which pure, fresh, warmed air from outside, through the heater, is constantly forced through egg-chamber—a distinctive Prairie State method.

Moisture automatically supplied throughout hatching period by famous Prairie State Sand-Tray. The sand-tray is a galvanized steel pan located on floor of egg-chamber and kept filled with wet sand. Thus moisture is supplied by evaporation underneath the eggs, so preventing evaporation from the eggs themselves and instituting conditions approaching those in a natural nest stolen upon the ground. Relative humidity in egg-chamber approximates 60 per cent, as under the hen.

The nursery, the floor of which is the egg-chamber bottom, is deep enough to allow ample headroom for chicks or ducklings. Floor is smooth, and dust and filth cannot collect.

Egg-trays are of light basswood with galvanized wire-cloth bottoms, strong and durable. Front ends have removable drops for chicks to pass into nursery. A burlap mat rests on nursery floor to receive chicks after removal of sand-tray at close of hatch.

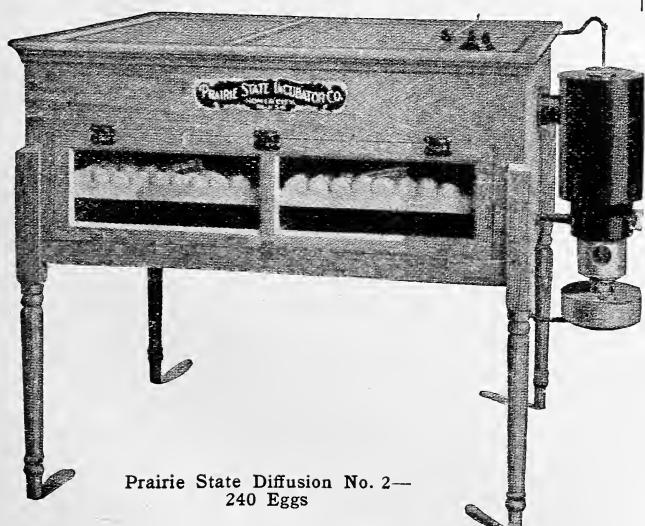
Entire Incubator is built of highest grade materials, lumber, steel and cast iron. Nothing to rust out or deteriorate. Double glass in non-warping doors.

The operation is sanitary. No cloths, felts, or screens to collect dust and effluvia. All such accumulation, with down or other dirt, is removed with the sand-tray at close of hatch.

A Prairie State Incubator Is a Permanent Profitable Investment

No. 0, 100 eggs, weight crated, approx. 125 lbs.	.....	\$30 00
No. 1, 150 eggs, weight crated, approx. 160 lbs.	.....	37 50
No. 2, 240 eggs, weight crated, approx. 245 lbs.	.....	52 50
No. 3, 390 eggs, weight crated, approx. 300 lbs.	.....	67 50

THE NEW PRAIRIE STATE CATALOGUE, which will be sent free on request, explains fully the principles of construction and tells all about the different sizes of Incubators and Brooders.



Prairie State Diffusion No. 2—
240 Eggs

"Buckeye" Incubators—The Perfect Hatchers

Are Guaranteed to Hatch MORE Chicks and BETTER Chicks Than Any Other Incubator

WHY THE BUCKEYE SUCCEEDS. The unprecedented success which has followed the Buckeye for twenty-five years is primarily due to the invention of the Buckeye hot-water system.

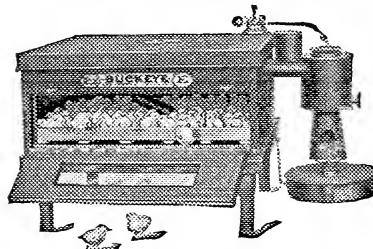
BUCKEYE GUARANTEE. This Buckeye Incubator is guaranteed to hatch every hatchable egg, and we further guarantee the perfect working of all its mechanical parts.

HATCH MORE AND STRONGER CHICKS. The Buckeye will hatch more chicks and stronger chicks than any other make of Incubator. It requires no artificial moisture, will operate satisfactorily in any climate, and requires no attention to the regulator from the time a hatch is started until it is finished. Any Buckeye Incubator, regardless of size or style, can be heated to 103 degrees inside of an hour. The average Incubator requires from twelve to twenty-four hours to reach this degree of heat.

NO PREVIOUS EXPERIENCE NECESSARY. It is not necessary to have any previous experience to operate a Buckeye. The entire Buckeye system is so simple that a boy or girl can operate it as satisfactorily as an experienced operator.

Style E Buckeye Incubator

All Style E Incubators have single walls and are equipped with galvanized rust-resisting heaters.

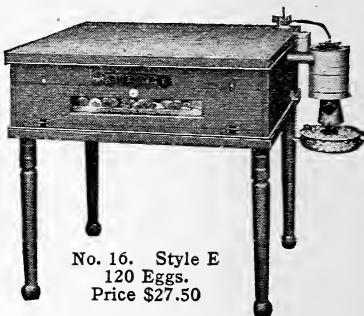


No. 14. Style E
Weight, crated for shipment, 55 lbs.
Capacity, 60 eggs. Price \$16.50

No. 14, Style E is especially adapted for use by the small raiser. It has all the important features of the larger machines, such as visible thermometer, and the Buckeye heating and ventilating systems. The temperature is easily regulated and the consumption of oil is low. Price \$16.50.

No. 16, Style E. Capacity 120 eggs; weight, crated for shipment, 85 pounds. This machine is the same as No. 14, except that it has a greater egg capacity and long legs instead of short ones. Price \$27.50.

No. 17, Style E. Capacity 200 eggs; weight, crated for shipment, 125 pounds. Same as No. 16, except that it has greater egg capacity. Price \$36.75.



No. 16. Style E
120 Eggs.
Price \$27.50

Buckeye Standard Incubators

The Buckeye Standard is an improved Buckeye. It is fire-proof and fool-proof. It is equipped with every desirable device that could possibly add to the efficiency of an incubator. Only the best of material is used throughout, and a Standard should last a lifetime. In addition to being the most satisfactory hatcher on the market, the Standard Buckeye is fire-proof, and, therefore, insurable. Each machine is inspected by the National Board of Insurance Underwriters before it is put on the market.



No. 1
Standard
120 Eggs
Price \$37.50

No. 1 Standard has a capacity of 120 hen eggs, or 85 duck eggs. It is complete in every detail, and is ready for immediate use. The weight, crated for shipment, is 100 pounds. This Incubator is insurable and bears the Underwriters' label. An improved feature of all Standard Incubators is the enclosed lamp. Equipped with oil- or gas-heater. Price \$37.50.

No. 2 Standard has a capacity of 175 hen eggs or 140 duck eggs, is equipped with oil- or gas-heater, and is complete and ready for use. Weight, crated for shipment, 135 pounds. This machine is insurable, and bears the Underwriters' label. Price \$44.50.

No. 3 Standard has a capacity of 230 hen eggs or 200 duck eggs, is equipped with oil- or gas-heater, and is complete and ready for use. Weight, crated for shipment, 200 pounds. This machine is insurable, and bears the Underwriters' label. Price \$57.75.

No. 4 Standard has a capacity of 350 hen eggs or 280 duck eggs. Equipped with oil- or gas-heater, and is ready for use. Weight, crated for shipment, 230 pounds. Insurable, and bears Underwriters' label. This machine is very convenient for the commercial raiser. Price \$68.

No. 5 Standard (Mammoth Standard). Capacity, 600 hen eggs or 480 duck eggs. Outside dimensions, 54 inches square, 36 inches high. Equipped with four egg-trays, holding 150 eggs each. Double doors on front and back; oil- or gas-heater. Complete and ready for use. Bears Underwriters' label. Weight, crated for shipment, 325 lbs. Price \$107.



Standard No. 5
600 Eggs. Price \$107

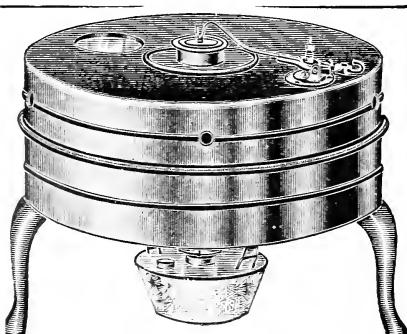
Approved by the National Board of Insurance Underwriters. Anybody Can Hatch Chickens with a "Buckeye."

ASK FOR A BIG "BUCKEYE" CATALOGUE

Baby Grand Incubator 50-Egg Capacity—All Metal

Unique and superior in its construction; beautiful in its appearance; excellent in its hatching qualities; and the most reliable and easiest operated small Incubator ever offered to the trade. It has a glass window in top so thermometer and chickens can be seen without opening machine. It has a positive heat and moisture regulation, and is equipped with a moisture receptacle for applying additional moisture when needed. Has double top, well insulated and packed; double side walls, with a free circulation of hot air between the walls all the time, making an equal distribution of heat through the machine. The ventilation is perfect, supplying warm, fresh air to all parts of egg-chamber at all times.

Price \$7.50; postpaid, \$7.80



Reliable "Standard" Incubator**RELIABLE BECAUSE RIGHT**

They are made of high-grade, thoroughly seasoned lumber; double walls, space between walls carefully insulated with the best non-conductors of heat; the top above tank is heavily insulated with several thicknesses of insulation, each layer separated by sheets of heavy non-conducting cardboard; two separate doors, made extra thick with extra-heavy glass which permits an easy observation of all parts of the egg-chamber without opening doors of the machine; double heating system, a feature which gives a decided advantage in economy of operation.

Perfect moisture is assured, heated air throughout the machine coming in contact with air from ventilator. Has nursery beneath egg-tray.

The Reliable Standard Incubators are made in both the hot-air system and the hot-water system.

The hot-air system consists of two tubes, one running entirely through the Incubator and the other open at the inner end, supplying fresh air and at the same time radiating heat.

The hot-water system consists of two tanks, a hot-air tank and a copper

hot-water tank. The hot-air tank heats the fresh air supply before conducting it into the egg-chamber; also radiates the heat from its own surface.

No.	Capacity	Kind	Size	Weight	Prices
49a	100 Eggs	Hot Air	12 x 23 x 29 in.	70 lbs.	\$22 50
51	140 Eggs	Hot Air	17 x 32 x 26 in.	110 lbs.	31 00
53	240 Eggs	Hot Air	17 x 35 x 44 in.	155 lbs.	43 00
55	350 Eggs	Hot Air	17 x 36 x 72 in.	200 lbs.	51 00
57	450 Eggs	Hot Air	17 x 44 x 53 in.	215 lbs.	59 00
50a	100 Eggs	Hot Water	17 x 23 x 29 in.	75 lbs.	28 00
52	140 Eggs	Hot Water	17 x 32 x 26 in.	115 lbs.	37 00
54	240 Eggs	Hot Water	17 x 35 x 44 in.	175 lbs.	51 50
56	350 Eggs	Hot Water	17 x 36 x 72 in.	215 lbs.	63 00
58	450 Eggs	Hot Water	17 x 44 x 53 in.	225 lbs.	74 00
82	70 Eggs	Hot Water	18 x 20 x 14 in.	53 lbs.	17 00
84	125 Eggs	Hot Water	24½ x 26½ x 14 in.	80 lbs.	28 00

Write for Complete Catalogue Giving Detailed Description

The Oakes "Electric Hen" Incubator and Brooder Two Machines in One

The expression "you can do it better with electricity," can not be more fittingly used than in connection with artificial incubation. The electric current as applied through the heater in our machines, furnishes the ideal heat for an Incubator. You "push the button" and the heat is there, mild and constant; always the same, perfectly safe and under absolute control within a fraction of a degree. No other kind of Incubator can be made so completely automatic as an electric machine.

The Oakes Electric Incubator is light and compact, and occupies small space. It is metal throughout except the insulation, which is porcelain, asbestos, and fibre. The case is

double walled and packed with wool felt to hold the heat.

The Regulator. The heat is controlled by a regulator, operated by a very sensitive thermostat, and having a dial with an index point, making it convenient and easy to adjust it to any desired degree. When the thermometer rises above the degree to which the regulator is set, the expansion of the thermostat instantly separates the platinum contact points and the current is shut off, stopping the heat completely.

The Oakes Electric Hen consumes about as much electric current as one 25-watt lamp, and in a room of ordinary temperature the current is on only one-quarter of the time.

THE HOVER

A set of legs and a double brooder curtain are furnished as a part of the equipment with each Electric Hen.

It requires only about five minutes to remove the lid from the Incubator and attach the legs and curtain, making a most perfect Hover, as here shown.

These machines are furnished for either 32-volt or 110-volt currents.

60-Egg, complete with thermometer, hover-curtain, and legs \$21 00

100-Egg, complete with thermometer, hover-curtain, and legs 30 00

Newtown Oil-Burning Colony Brooder (Blue Flame, Wickless)

Broods Like a Coal Burner. Wickless burner; burns coal oil (kerosene) with a steady blue flame. There is no smoke, no odor, and it is noiseless.

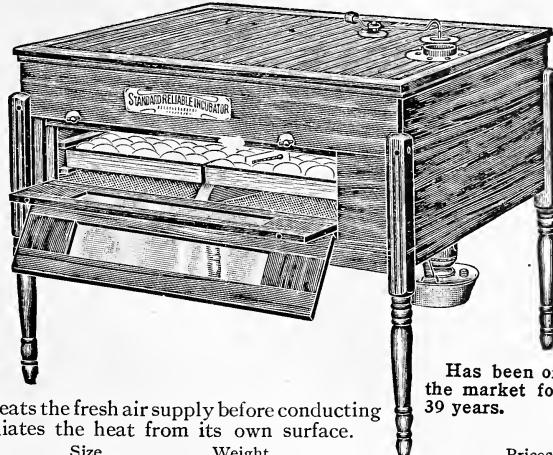
The Blue Flame Wickless Burner. It burns coal oil (kerosene) with a steady blue flame. Combustion is so perfect that it gives off no smoke or odor and is perfectly noiseless in operation. The burner is surrounded by a safety jacket and when the deflector is in position the heat radiator also surrounds the burner, thus entirely and safely enclosing it.

Air Always Fresh and Pure. It is as impossible to keep foul air under the Newtown hover as it is to keep a rock from sinking in water.

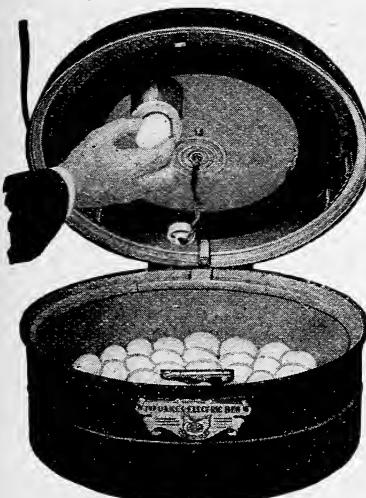
No. 218. 36-inch Hover, 18-inch Radiator \$20 00

No. 225. 52-inch Hover, 22-inch Radiator 27 50

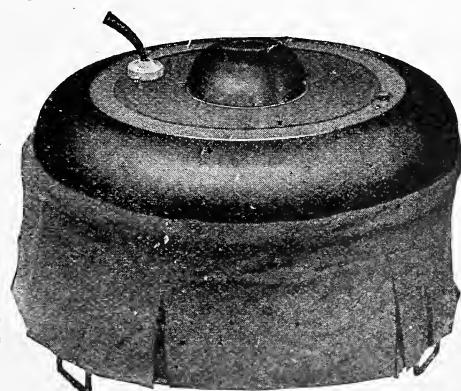
Write for Special Circular



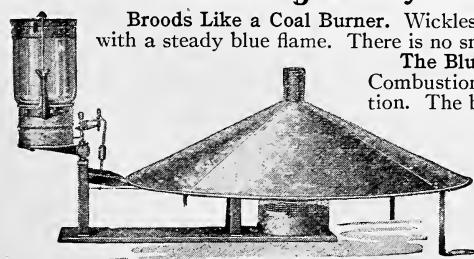
Has been on the market for 39 years.



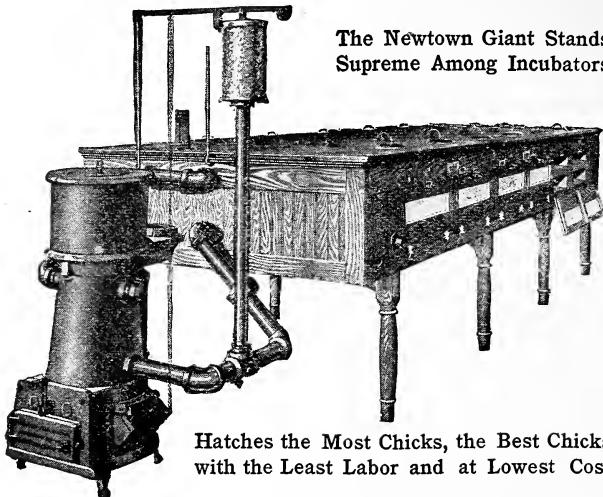
The Oakes Electric Hen



The Hover



The Newtown Giant Incubator



The Newtown Giant Stands Supreme Among Incubators

Hatches the Most Chicks, the Best Chicks with the Least Labor and at Lowest Cost

An Incubator of large capacity costs considerable money and should represent a long-time investment—one which will regularly pay big annual dividends in cash, satisfaction and peace of mind. A poor Incubator is a constant source of loss, worry, and annoyance. Invest your Incubator money wisely. The success of your poultry operations depends largely upon this.

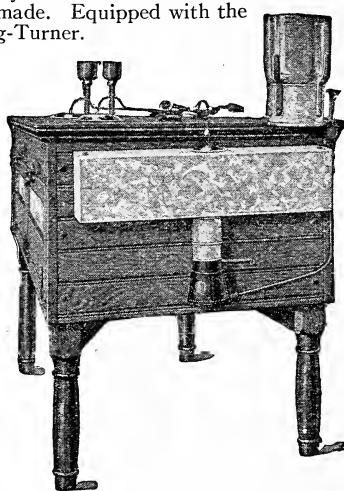
Buy the Newtown Giant—the choice of the most experienced and successful practical poultrymen—the Incubator which is scientifically constructed and leaves nothing to chance—eliminates labor, worry and uncertainty—hatches more and better chicks than any other Incubator made. Equipped with the only reliable Automatic Egg-Turner.

Incubator catalogue and prices on all sizes of Giants, from 600 eggs up to 24,000 eggs, sent upon request.

Newtown Semi-Giant Incubators

Capacity, 60,- 150- and 300-Egg

Aside from their superior hatching qualities, Newtown Semi-Giant Incubators are the most economical because the capacity of the 150- and 300-egg sizes can be increased by adding additional 150- or 300-egg sections at any time.



PRICES

60-Egg Incubator, complete.....	\$15 00
150-Egg Incubator, complete.....	35 00
300-Egg Incubator, complete.....	60 00
Additional 150-egg section, complete, without lamp	35 00
Additional 300-egg section, complete, without lamp	60 00

A larger lamp is required for Semi-Giants of 600-egg capacity and larger. Price of this lamp is \$5.

BABY CHICKS. Get our prices before placing your order. All leading breeds from high-bred stock. Beginning early in March will furnish chicks until the end of the season late in June.

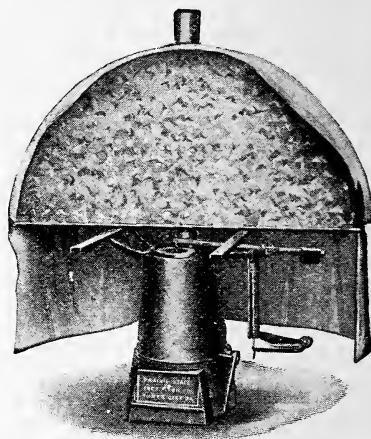
Prairie State Stove Brooders

These modern Brooders, first designed in 1913, were presented for consideration of poultrymen producing on a scale sufficient to demand Brooders capable of caring for flocks of 250 to 1,000 or more birds, at expenditure for fuel and labor which should be a minimum.

The Prairie State has from the first incorporated distinctive principles of design and original features common to all Prairie State models. Notably, there is the flat steel hover canopy, hinged and reinforced in center, permitting raising of front half for free access to all parts of Brooder for cleaning, fuel-charging, and ash-removing. Flat construction insures saving of heat by slow radiation, uniform temperature distribution, and downward deflection of heating-ventilating currents over backs of chicks.

No magazine is used which often causes trouble by belching smoke and gas into Brooder-room. Ample fire-pot capacity insures carrying fire eighteen to twenty-four hours, and since no stove burns more coal than the amount of admitted fresh air will permit, a magazine is not a necessity and, as a probable nuisance, is better omitted.

The stove is all cast iron, resting solidly on base without legs, affording no hot place for chicks to reach, and impossible to knock over accidentally. Ash-base is big enough to prevent overheating. Base door fits snugly and need be opened only when removing ashes. Fire-pot extra heavy to insure long life under hot fire. Capacity to carry fire eighteen to twenty-four hours. Grate of shaker type with one-inch space above, permitting clinkers to be raked out and fire kept bright and clean. Burns chestnut size anthracite best, but will burn bituminous coal. Regulator exclusive Prairie State triple control design, regulating in one movement air-inlet on grate-level, top and chimney drafts.



No. 0 "Junior" Canopy Raised Showing Design



The No. 1 "Junior" Stove Brooder

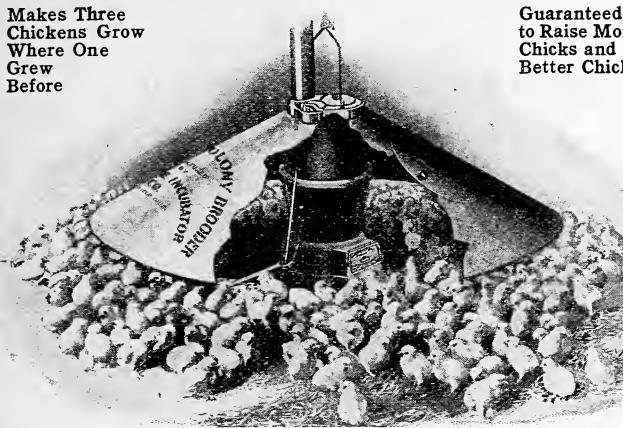
Stove, 23½ inches high. Diameter fire-pot, 9 inches. Diameter grate, 9 inches. Diameter stove at base, 15 inches. Diameter canopy, 52 inches. Weight complete, 116 pounds. Furnished with shaker, ash-pan, coal-funnel, and thermometer. Has a capacity of from 50 to 1,000 chicks.

Price \$25

The No. 0 "Junior" Stove Brooder

No. 1 "Junior" Showing Working Parts Stove, 21 inches high. Diameter fire-pot, 9 inches. Grate, 9 inches diameter. Canopy, 46 inches. Weight, complete, about 80 pounds. Chick capacity up to 700 Price \$20.

Makes Three
Chickens Grow
Where One
Grew
Before



Guaranteed
to Raise More
Chicks and
Better Chicks

The Standard Colony Brooder

(Patented July 4, 1916; April 24, 1917; May 8, 1917)

Coal Burning—The Most Remarkable Brooder Ever Invented

SELF-FEEDING

SELF-REGULATING

EVERLASTING

Cuts the Cost of Equipment and Operation to Less Than Half—Reduces the Time and Labor to Less Than a Fourth. Nothing to Break. Nothing to Wear Out. The Simplest, Safest and Most Economical Brooder Ever Invented.

Buckeye Brooder Stoves will do anything any other Brooder will do, regardless of price—and do it better. It matters not whether you have ten or ten hundred chicks under a Standard Colony Brooder, the results are the same. You can remove part of the chicks or increase the number at any time.

Air Always Pure and Fresh. No dampers or valves of any kind between the smoke-pipe and the fire, the draft being controlled automatically, an exclusive feature of the Standard Colony Brooder and the only coal-burning brooder that is absolutely free from gases under the hover.

Operated Anywhere. No room is too large or too small for a Standard Colony Brooder. Whether it is operated in the largest barn or the smallest colony house, the results will be the same.

Burns Any Fuel. Hard or soft coal, charcoal, coke, briquettes, or gas. Hard coal is best simply because it is cleaner. All fuel should be nut size.

Regulator. Two double-disc thermostats (tandem hitched) supported on substantial casting that is bolted solidly to stove. Lower arm movable and attached to check valve by substantial iron rod. Chick-proof, accurate, and positive.

Standard Colony Brooder is fire-proof, simple and requires little attention; has but one adjusting nut, which you need never touch more than once in a season. Requires absolutely no more attention than filling with coal once a day, shaking down the ashes into the pan twice.

The First Cost is the Only Cost. Nothing to Wear Out. Nothing to break, being made of cast iron just like a kitchen range, and the hover is of galvanized steel built to last a lifetime.

Made in Two Sizes

NUMBER 18

Height of stove, $20\frac{3}{4}$ inches; diameter of stove, $10\frac{3}{4}$ inches; diameter of base, $11\frac{1}{2}$ inches. Fire-proof base, 7 inches high with corrugated asbestos pad attached to lower plate and 1-inch air-space between asbestos pad and floor.

Grates. Rocker furnace type made of solid casting, outside clearance, free burning, self-cleaning, and anti-clog. Diameter $7\frac{1}{2}$ inches.

Hover. Galvanized steel, 42 inches in diameter, removable, mounted on a substantial ring casting that rests on the top of the stove, moulded to fit and cannot be displaced. Furnished complete with rope and pulleys for quick attachment.

Capacity, any number of newly hatched chicks up to 500. Shipping weight, 75 lbs.

Price \$21.50

NUMBER 19 STANDARD COLONY BROODER

Height of stove, $22\frac{1}{2}$ inches; diameter of stove, 12 inches; diameter of base, $11\frac{1}{2}$ inches. Fire-proof base, 7 inches high, with corrugated asbestos pad attached to lower plate and 1-inch air-space between asbestos pad and floor.

Grates. Rocker furnace type made of solid casting, outside clearance, free-burning, self-cleaning, and anti-clog. Diameter, 9 inches.

Hover. Galvanized steel, 52 inches in diameter, removable, mounted on a substantial ring casting that rests on the top of the stove, moulded to fit and cannot be displaced. Furnished complete with rope and pulleys for quick attachment.

Capacity, any number of newly hatched chicks up to 1,000. Shipping weight, 94 pounds.

Price \$26.50

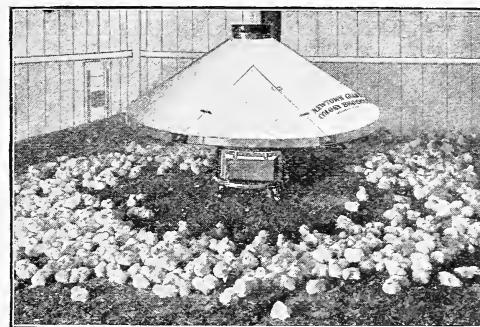
Newtown Coal-Burning Colony Brooder

COAL-BURNING SELF-FEEDING SELF-REGULATING
Raise the Most Chicks, the Best Chicks, with Least Labor and Cost

You should have Brooders which will raise good chicks and lots of them—which are not expensive to buy—which do not demand costly buildings—which are economical of labor and fuel—which will give continuously satisfactory service for many years.

The Newtown Coal-burning Colony Brooder meets these specifications. It was the first successful brooder of the colony type offered to American poultrymen, and thousands are now in use in every state of the Union and nine foreign countries.

The Newtown Colony Brooder is coal-burning, self-feeding, self-regulating, freely ventilated, safe, and durable. It will satisfy your most exacting demands. It is made in sizes to fit your building and for any number up to 1,200 chicks. Get the size you need, but be sure it's a genuine Newtown. There's none "just as good."



PRICES

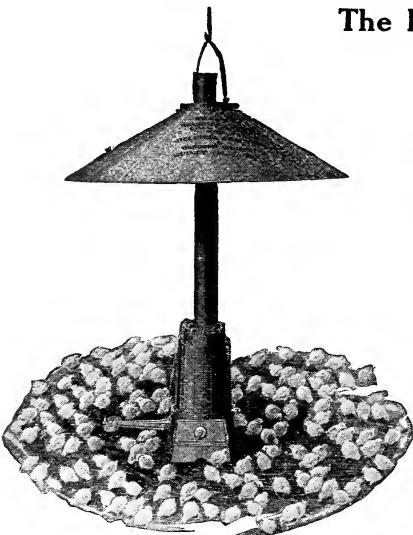
Size of Brooder Based on Floor-Space Used in Coldest Weather

No. 6 for up to 120 square feet.....	\$22.50
No. 7 for up to 120 square feet.....	25.00
No. 11 for up to 240 square feet.....	32.50
No. 12 for up to 400 square feet.....	40.00

Nos. 6 and 7 better adapted to single-room colony houses. The No. 6 is not equipped with a coal magazine and will require coaling morning and evening.

A Newtown Colony Brooder can be furnished with an attachment for burning soft coal at \$1.50 additional, or gas burners can be furnished for \$3 additional charge. Gas Regulators, \$3 additional.

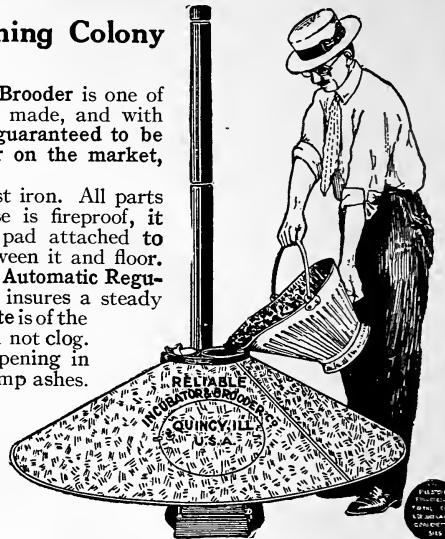
See them set up at our store and you will be convinced. We can make immediate deliveries. Complete Brooder Catalogue sent upon request.



Showing how canopy is raised to clean out

used. These Brooders can be operated in any kind of a building or room, in any kind of weather.

	Height	Diam. of Cylinder	Diam. of Grate	Canopy	Capacity	Price
No. 9	22 inches	10 inches	9 inches	42 inches	500 or less.....	\$21 50
No. 10	26 inches	13 inches	11 inches	52 inches	1000 or less.....	26 50

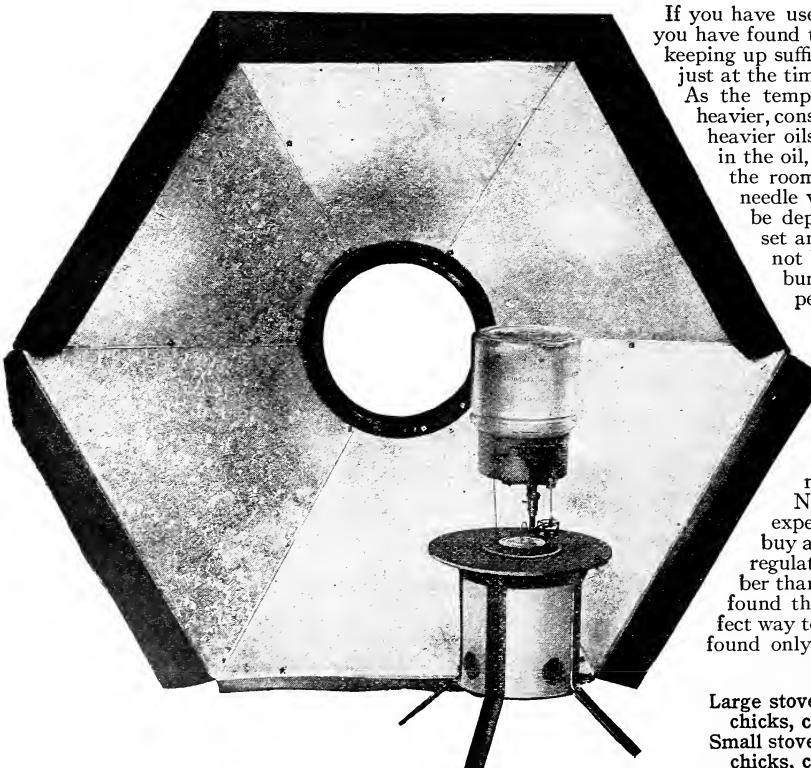


Showing our Standard Coal-Burning Brooder in operation

No-Cold Oil-Burning Brooder Stove

We call it the No-Cold Brooder Stove because you will never go to the brooder house in the morning and find it cold.

An Automatic Valve with Damper That Holds the Temperature as Accurate as an Incubator



If you have used an oil-burning stove with gravity feed valve you have found that the weak point in this type of stove was in keeping up sufficient heat during the night, the heat lowering just at the time it should increase. There is a reason. Why?

As the temperature lowers the body of kerosene becomes heavier, consequently flows slower, not a great change as in heavier oils but enough to slacken the flow. This change in the oil, together with the lowering of temperature in the room makes a very wide variation, so much that no needle valve regulated by hand or by water alone can be depended on as the hand valve stays where it is set and the automatic valve with wafer alone cannot be set to take care of this change because the burner and wafer cannot be made to work in perfect harmony with each other. The automatic damper working in connection with the needle valve makes the valve and burner work in perfect harmony, holding up the heat during the night and still hold the temperature down during the heat of the day, making the No-Cold reliable as an incubator as it holds an even temperature.

The originator of the No-Cold Brooder Stove made the first Blue-Flame Oil-Burning Stove.

No man in America has spent more time and experimental work on this type of stove. If you buy a stove with a valve depending on hand or wafer regulator alone and it does not hold up the heat, remember than the man who originated the Blue-Flame Stove found this weakness long ago and has also found a perfect way to overcome it—the automatic valve and damper found only on the No-Cold Brooder Stove.

PRICES

Large stove with 50-inch canopy, capacity 100 to 800 chicks, complete, ready to operate	\$21 50
Small stove with 36-inch canopy, capacity 100 to 300 chicks, complete, ready to operate	18 00

“Buckeye” Blue-Flame Colony Brooders

Here is a Colony Brooder heated by an extremely efficient “Blue-Flame” burner that can be used to good advantage by breeders who are unable to secure hard coal.

These Brooders are equipped with a wickless type of “Blue-Flame” burner that will furnish an abundance of heat at a very low cost of operation. There is nothing complicated about their operation, and since we know them to be the most highly efficient Brooder of this type on the market, we have no hesitation about recommending them to our trade.

All these Brooders, regardless of size, are equipped with a self-feeding oil container, holding one gallon of oil, which never requires filling more than once in twenty-four hours.

The flame in the burner is controlled by a finely adjusted valve which requires very little attention.

The hovers are substantially built of galvanized steel and are supported by four cast-iron legs.

PRICES

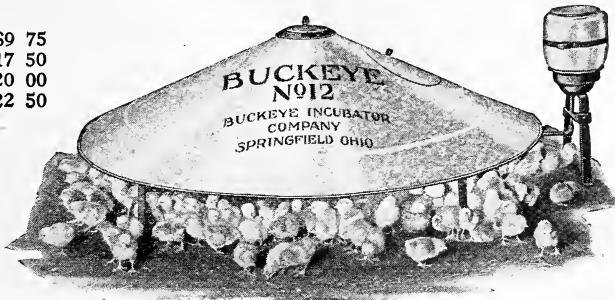
No. 9. Diameter 24 inches, 75 chicks	\$9 75
No. 10. Diameter 34 inches, 200 chicks	17 50
No. 11. Diameter 42 inches, 350 chicks	20 00
No. 12. Diameter 52 inches, 500 chicks	22 50

PREVENTION versus CURE

“An ounce of prevention is worth a pound of cure” applies to poultry diseases.

A liberal use of Carbola and “B-K” will keep away the lice and mites, as well as contagious diseases.

USE CARBOLA INSTEAD OF WHITE WASH



“Buckeye” Lamp-Heated Brooders

Nothing about it but metal—excepting the curtain—and that's interchangeable

There Is No Waste of Heat. The dead air-space keeps all the heat in and all the cold out. This construction insures the highest degree of efficiency, and we guarantee the satisfactory heating of every Brooder in any inside temperature down to freezing.

The “Buckeye” Lamp is Not Enclosed. This feature of the “Buckeye” Brooder is in itself one of the most valuable improvements ever made to an oil-burning Brooder. It is, in fact, the improvement that makes the oil-burner just as safe as a coal-burning stove.

Fresh Air. The constant current of fresh air over the lamp-bowl prevents all possibility of overheating the oil, and absolute safety is the result. This improvement is just as good as an insurance policy. **It's the fresh air that makes the chicks grow.**

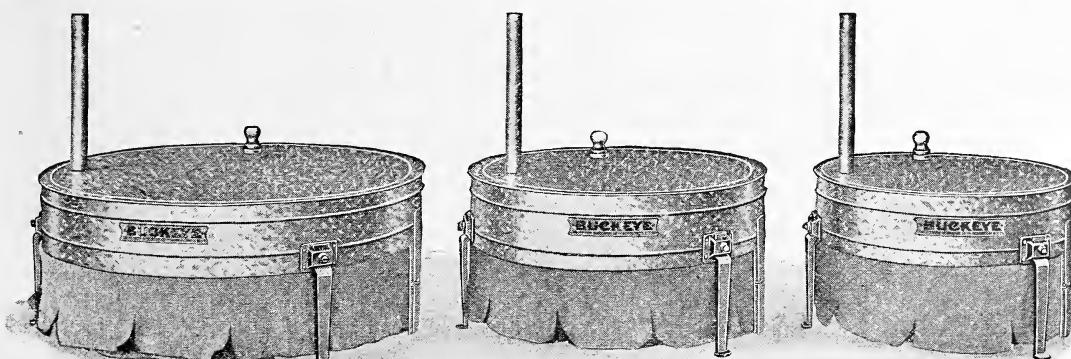
The Outside Shell is made of 28-gauge galvanized steel—the inside shell is 28-gauge black iron—with a one-inch dead air-space between.

The Brooder Body is supported by three **Cast-Iron Legs** that are rigidly secured to the sides by a set-nut, which makes them easily detachable.

The Lamp Support is free from the floor and is welded to the plate above. The door to the lamp-chamber is of galvanized steel with a large peep-hole for the ready observation of the lamp.

The Lamp-Bowl is made of seamless galvanized steel—the burner is a “Miller”—all the fittings are of heavy brass and the chimney is made of sturdy black iron.

The Thermometer is mounted on a hardwood turning which is dropped through the top of the brooder, and brings the bulb of the instrument right down to the level of the chicks. Each Brooder is equipped with a thermometer.



PRICES—Made in Three Sizes

No. 20. Diameter 19 inches, 60 chicks	\$11 75
No. 21. Diameter 22 inches, 100 chicks	15 50
No. 22. Diameter 30 inches, 150 chicks	19 00

RAISE ALL YOUR CHICKS WITH
The Reliable Blue Flame Wickless Oil-Heated Colony Hover

"THE MODERN HOVER"

This Hover represents the 30-inch, 42-inch, and 52-inch sizes.

Burns the gas generated from coal oil.

Steady blue flame.

Comfortable and easy to operate.

Economy of operation.

Simple in construction.

The flow of oil is regulated automatically.

No wick to trim.

Visible oil-feed.

Abundance of heat.

Convenient and safe.

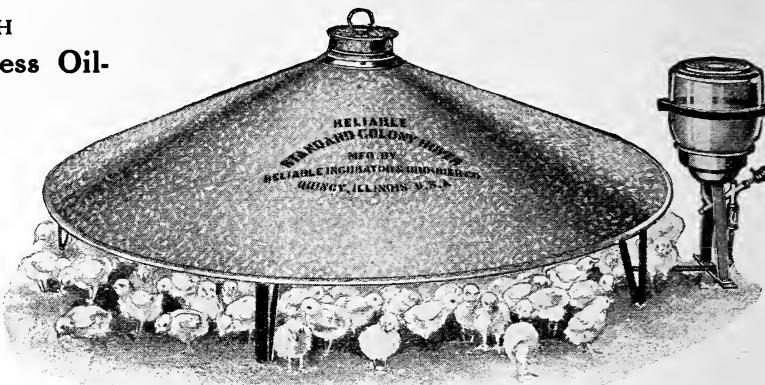
No oil-fumes.

No coal smoke, or gas.

We furnish a one-gallon self-feeder glass oil-container with our 30-, 42-, and 52-inch Hovers, and a $\frac{1}{2}$ -gallon galvanized steel oil-can with our 18-inch Hovers, so that you need have no fear of light going out, for it is simple and requires very little attention. It is equipped with a safety valve, so oil is dropped to heater as needed. After the valve is once properly adjusted according to directions you need not pay any more attention, only to feed and water the chicks, for they are always happy and comfortable with plenty of pure, fresh, warm air at all times.

Our Ventilator in top of cone of Hover leaves out all foul air made by the chicks. This is all done automatically without any bother to the operator and which insures steady and healthy growth of the chicks placed in its care.

These Hovers are made of galvanized steel, have steel legs and have a capacity, with our 22-inch Hover, of 100 chicks



or less; 30-inch Hover, 350 chicks or less; with our 42-inch Hover of 500 chicks or less; with our 52-inch Hover, 1,000 chicks or less.

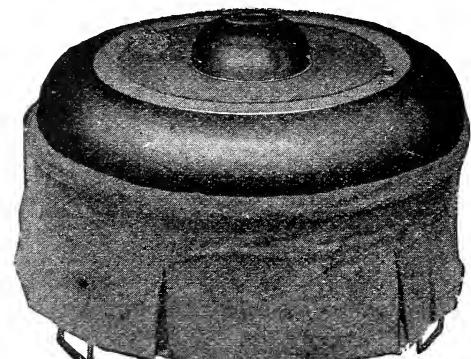
If you have a coal-burning brooder and desire to change to our oil-burning Hover it will only be necessary for you to purchase our Blue-Flame Oil-Heater Complete, to be used instead of stove. These Heaters listed below. Complete instructions for making change sent with each outfit.

PRICES

No.	Size	Capacity	Complete Hover	Heater Only
00	22 inch	100 chicks or less	\$10 00	\$7 25
0	30 inch	350 chicks or less	17 50	10 50
1	42 inch	500 chicks or less	18 50	11 80
2	52 inch	1000 chicks or less	21 50	13 35

The Economy Brooder Hover

All Steel, Light, Strong and Durable



The Economy Hover can be used anywhere with perfect safety and only a very small flame is required to keep up the temperature, as the lamp is inside, and no heat is lost.

It is compact, light, and all in one piece, so that it can be conveniently lifted by the two handles and moved from one place to another without disturbing the lamp.

Safety, Convenience, and Economy

The lamp, lamp-slide and lamp-box form a very convenient combination, and one which is doubly safe as the lamp has an O. K. Safety Burner, and the lamp-box is fireproof.

The wire cage on the Economy Hover, if closed at night, prevents the possibility of any losses by rats or other vermin.

The cage is also a great convenience in preventing the chicks from going too far from the Hover during the first two or three days. The two halves of the cage are hinged to the lamp-box, and can be opened up during the day to allow the chicks to run out and in.

PRICES

No. 1 Economy Hover. Heating Drum, 18 inches in diameter; cage, 26 inches in diameter.....	With Cage \$9 50	Without Cage \$6 50
No. 2 Hover. 22-inch drum; 30-inch cage.....	13 00	10 00

The Oakes Electric Hover

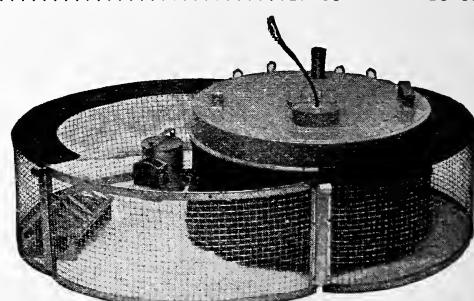
The Oakes Electric Hover is made on the same general principles and of the same high grade material as the Oakes Electric Incubator and has a very sensitive and accurate regulator equipped with platinum contact points. It has a heavy double curtain attached with large eyelets and hooks.

The Oakes Electric Hover will give you the best results with the least possible care and trouble.

The Hover is made in the 32 voltage and 110 voltage.

PRICES

No. 1. 18-inch Hover, with cage.....	\$15 00
No. 2. 22-inch Hover, with cage.....	20 00



Our Monthly Feed Price-List, a copy of which accompanies this catalogue, is revised the first of each month, and will be sent on request

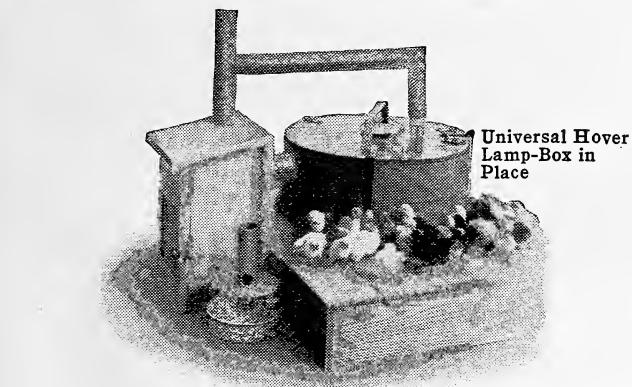
Prairie State "Junior" Portable Hover

The "Junior" Portable Hover is another departure from Prairie State policy in that, in offering more Brooder value for less money than any corresponding type of equipment ever produced, the price has been set at less than the Brooder is worth for the one purpose of meeting competitors' prices.

No more marked bargain has ever come from the Prairie State factories. Weighing but 36 lbs., it is easily carried by a woman or even a child. All galvanized steel, 23 inches diameter, with chick capacity

up to 100. Adjustable cotton duck curtain. Adaptable to any type of brooder house, and suits requirements of beginners or experts who desire to rear vigorous foundation stock in small flocks. Lamp rests on a cone-shaped pan with semi-circular steel shield which shuts it off from hovering space. This shield is attached to Hover rim, entire outfit being lifted without extinguishing flame. Hinged steel door closes over half of lamp, protecting burner and chimney from drafts and leaving half of lamp exposed to keep oil cool.

Price, boxed, complete with Regulator, \$10



Universal Hover
Lamp-Box in
Place

Prairie State Universal Hover

The Prairie State Universal Hover, first in the market and more extensively imitated than any other Brooder, has a universal sphere of usefulness. It is adaptable to any form of permanent outdoor Brooder house, or any colony house, and may be moved from one house to another as the flocks pass the brooding stage. It is the only Hover ventilated by *actual outside fresh air*.

Top of tongued and grooved lumber, two thicknesses, insulated between layers. Diameter 22 inches, for 65 to 100 chicks. Cotton duck curtain hangs from steel rim attached to top. Top sanded and varnished. Hover high, round, and dark. Hollow steel radiator receives all lamp fumes, discharging them to open air. Radiator distributes temperature uniformly and deflects fresh air currents from separate wooden lamp box downward over backs of chicks. Positively free ventilation. Lamp 7½ inches diameter, metal chimney, No. 2 burner.

PRICES

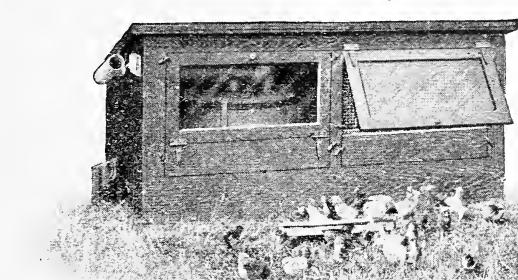
Outdoor Hover, with lamp-case and regulator.....	\$10 50
Outdoor Hover, with lamp-case, no regulator.....	9 00
Indoor Hover, no lamp-case, with regulator.....	9 50
Indoor Hover, no lamp-case, no regulator.....	8 00

The Home Hover

The Home Hover was designed to meet the requirements of those who raise small flocks of chicks around the home or the farm. It will accommodate any number up to fifty chicks. It is substantially built, of fireproof construction throughout, being made of heavy galvanized iron, no wood whatsoever being used. This assures the customer of a Hover that is everlasting because there is nothing to wear out. The heat passes through a specially constructed drum under the top of the Hover and thence to the outside air, thus eliminating the possibility of any fumes getting into the Hover.

There is nothing for the chicks to brush against and get burned, and no corners where they can be crushed. Raisers of small flocks cannot afford to be without a Home Hover.

Price \$5.50; postpaid, \$5.90



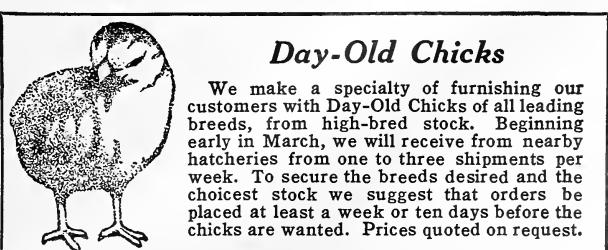
Prairie State Combination Colony Brooder

This Brooder is so designed as to be used for both a Brooder and a colony house. It is neat in design, factory built, and correct in principle. It is constructed of tongued and grooved lumber with heavy, tin-covered roof. The house is nicely finished in gray paint and the tin roof with red paint. The house is 60 inches by 30 inches, equipped at one end with the Universal Hover, the other end comprising the scratch-room or sun-parlor. It is converted into a permanent colony house by removing the Hover. The floor is 8 inches from the ground, leaving sufficient room for the lamp, and gives an assurance of dryness and warmth to the small chicks. The house is well lighted and ventilated, thus making an ideal colony house. Shipped knocked down to save freight, and is easily assembled.

Price complete, less Regulator, \$35. Regulator Extra, \$2

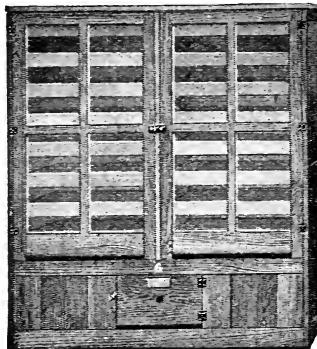
Prairie State Hot Water Brooder Stoves and Pipe Systems

Used in continuous type brooder houses, either in wall coil form for general heating in connection with lamp hovers, or direct in the brooder alley for actual brooding purposes. The oldest, yet best method known for intensive rearing of large flocks during severe weather. Made to order from specifications of your house. Heaters in three sizes. Write for Information and Prices.

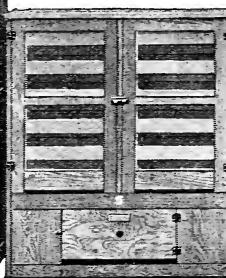


Day-Old Chicks

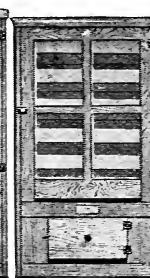
We make a specialty of furnishing our customers with Day-Old Chicks of all leading breeds, from high-bred stock. Beginning early in March, we will receive from nearby hatcheries from one to three shipments per week. To secure the breeds desired and the choicest stock we suggest that orders be placed at least a week or ten days before the chicks are wanted. Prices quoted on request.



No. 6
8 bus. or 256 qts.
for 800-1,200 hens
\$64



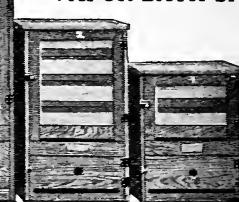
No. 5
4 bus. or 128 qts.
for 400-600 hens
\$41



No. 4
2 bus. or 64 qts.
for 200-300 hens
\$26



No. 3
1 bus. or 32 qts.
for 100-150 hens
\$19



No. 2
½ bus. or 16 qts.
for 50-75 hens
\$13

No. 1
¼ bus. or 8 qts.
for 25-35 hens
\$10

Outside cypress wall insulated with rosin board and asbestos to retain heat. Inside galvanized steel grain-chamber. Lamp-heat passes up between the metal and the wood walls. Utilizes all the heat. Takes but little oil in lowest temperatures. The water-pan above the lamp creates the vapor that bathes the grain in warm moisture, thus producing the highly edible vapor-bath sprouts. Fitted with drain-tube for water overflow, a ventilation system to keep down mold, glass doors to stimulate growth and produce chlorophyll in the sprouts, removable top, etc. The entire machine is made of first-class material, is finished in the natural colors of the cypress, makes a nice piece of furniture, and is without doubt the most economical and efficient Sprouter now manufactured. Nos. 5 and 6 have double sets of trays so that no tray when full of green oats is so heavy but that it can be handled by a woman. All sizes pass endways through ordinary doors.

Feed Sprouted Oats for Eggs

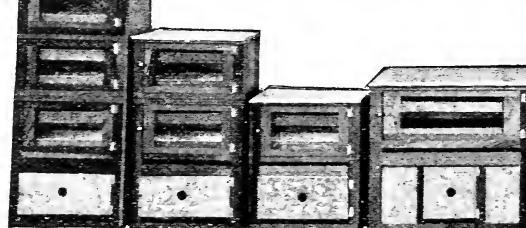
To get eggs in winter, feed sprouted oats. For prolific egg-production any season, there is no feed better or cheaper than the sprouted grains. When properly sprouted they afford not only the green forage the hens so much need, but they contain the valuable diastase, also the grape sugar, the "vegetable milk," and other easily digested and highly nutritious elements so essential in egg-production. It matters not on what ration the hens are fed, an increased egg-yield always results when sprouted oats are added.

WHEN AND HOW MUCH TO FEED

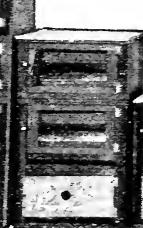
Best results are had when sprouts are 2 to 4 inches long. If hens are simply to be kept in good condition during winter for heavy spring laying, feed very sparingly. But for eggs, feed the hens **every day all the sprouts they will eat.** See that your Sprouter has a capacity of 1 bushel, or 32 quarts, for every 100 hens. By running a 1-bushel size at full capacity, putting in a few quarts each day of fresh oats as the sprouts are fed, a flock of 100 hens may be fed sufficient sprouts to produce eggs.

Premium Metal Sectional Grain-Sprouter

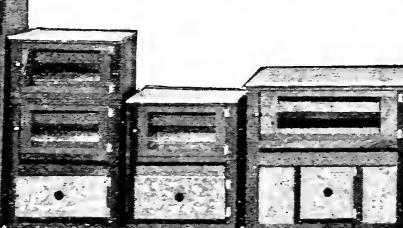
FOR USE IN MODERATE TEMPERATURE.
PRODUCES THE VAPOR-BATH SPROUT



SB2S
Base and
2 Sections
½ bus. or 24 qts.
for 75-100 hens
\$12.50



SB1S
Base and
1 Section
½ bus. or 16 qts.
for 50-75 hens
\$10



SB
Small
Base
½ bus. or 8 qts.
for 25-35 hens
\$7.50



LB1S
Base and
1 Section
2 bus. or 64 qts.
for 200-300 hens
\$19.50



LB
Large
Base
1 bus. or 32 qts.
for 100-150 hens
\$14



LB2S
Base and
2 Sections
3 bus. or 96 qts.
for 300-400 hens
\$25



LB3S
Base and
3 Sections
4 bus. or 128 qts.
for 400-600 hens
\$30.50

Prices of additional Sections: Large Section, \$5.50; Small Section, \$2.50

The Premium is constructed of galvanized sheet steel strengthened by an outside cypress framework. The metal will last for many years while the cypress is the "wood eternal." The Premium incorporates all the essentials of a vapor-bath Sprouter, such as a heater, vapor-pan, glass doors, ventilation, removable top, overflow tube, etc., and produces the vapor-bath sprouts. To be used in basement, cave, kitchen, or where the temperature does not run much below freezing.

The Premium is built on the sectional plan—buy what you now need and afterward add sections. Sections fit with telescope joint and stay on. Two base sizes are provided, the Small Base holding $\frac{1}{2}$ bushel and each of its sections $\frac{1}{4}$ bushel; the Large Base holding 1 bushel and each of its sections 1 bushel.

“Successful” Grain-Sprouter

The feeding of sprouted oats is highly endorsed by the poultry experts of the agricultural experiment stations, because grain fed in a sprouted condition is easily digested, goes three times as far, and is therefore much cheaper and better than when fed in a dry condition.

You can make your hens lay 40 to 50 per cent more eggs. You can reduce the cost of feeding 25 to 30 per cent by giving them SPROUTED OATS easily and quickly produced in the

“Successful” Grain-Sprouter

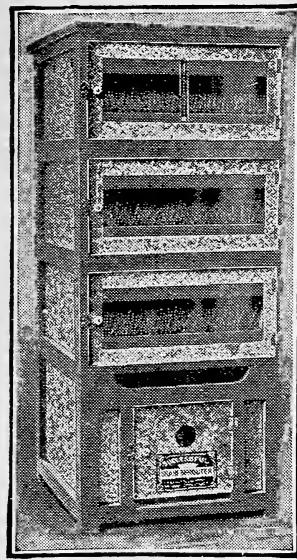
Made in Sections—Double Steel Walls—Fireproof—Safe to Use Anywhere in the House. The most profitable appliance for poultry-raising since the invention of the incubator. Manufactures for you in a week's time the best green egg-making feed at 15 to 18 cts. per bushel. Takes but 15 minutes a day to attend to. Costs but one-half cent per day for kerosene.

This succulent, nutritious, green feed will turn your hens from idle feed consumers into industrious egg-producers at a time when it takes but one dozen of eggs to bring as much money as two or three dozen in spring or summer.

All our Sprouters have a hinged top, permitting the operator to sprinkle the grain from above in one operation. The water percolates through all the trays. This is a great labor-saving device and practically eliminates any kind of a muss-up.

PRICES AND CAPACITIES

No. 1. Base and 1 section;	2 trays; holds 8 to 10 quarts dry grain.	(For 30 to 60 hens).....	\$12 00
No. 2. Base and 2 sections;	4 trays; holds 16 to 20 quarts dry grain.	(For 75 to 100 hens).....	15 00
No. 3. Base and 3 sections;	6 trays; holds 24 to 30 quarts dry grain.	(For 130 to 200 hens).....	18 75
No. 4. Base and 4 sections;	8 trays; holds 32 to 36 quarts dry grain.	(For 250 to 350 hens).....	22 00
No. 5. Base and 5 sections;	10 trays; holds 40 to 50 quarts dry grain.	(For 400 to 600 hens).....	25 00
Each additional section and two galvanized all-steel trays.....			3 50



Banner Root Cutters for Poultry

Indispensable to the Hen Man, Duck Man and Broiler Man. Solves the problem of an article always in demand at good prices: "WINTER EGGS"

Reduces cost of feeding, increases production, and is always a medium, right at hand, to give the poultry in proper shape for consumption, the most economical winter food known—ROOTS AND VEGETABLES.

No. 7. Exclusively for Poultry

It cuts fast and is easy running. Leaves the feed in fine, brittle, ribbon-like strips that make choking impossible. Fowls large or small can safely eat the feed. The knives are adjustable and made of the very best of steel. An iron grate in bottom of hopper lets dirt and gravel escape before reaching the knives. In this cutter we offer the poultrymen a low-priced, high-grade, nicely finished and mechanically constructed machine, and feel that anyone who desires to feed roots and vegetables to his flocks can well afford to own one. Two to five minutes will cut enough feed for a large flock of birds.

Price \$6

No. 28. For Poultry, Sheep, or Lambs

Large Capacity. Hand or Power Use

The No. 28 cuts all roots and vegetables, like beets, carrots, potatoes, onions, apples, turnips, cabbage, or anything else of the same nature, into ribbons, literally

shredding the material into feed cut so fine that all stock and poultry can feed without danger of choking. Built strong and stout to stand power use, and furnished with a crank so it can be used by hand also. Cutter has a large capacity and is supplied with eight steel knives. It cuts fine enough for sheep, lambs, and fowls and still has ample capacity so it can be used to cut for cattle also. Running the knives one way it shreds the roots and by reversing the knives it will cut in flat slices. The hopper is such shape that the machine feeds itself and the roots cannot possibly get away from the knives until they are all cut. A grate in the bottom of the hopper allows the dirt to escape before going to the knives. This Cutter is designed more particularly for power use for the large poultrymen and sheepmen. Weight of machine, complete, 180 pounds. Capacity of hopper, about $2\frac{1}{2}$ bushels.

Price, \$25



No. 7



No. 28

If you want more eggs during the fall and winter months, provide spring conditions in the feeding system for your hens and they will respond promptly with a good supply of eggs, and do this at a time when one dozen of eggs brings as much money as two or three dozen in the spring.

Mann's Bone-Cutters

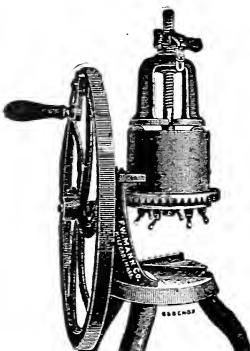
THE LAYING HEN IS THE PAYING HEN

The poultry-raiser wants eggs, and wants them when eggs are worth the most. Green bone and raw meat produce them. There is no doubt about that. Experience proves it; science shows why.

The hen will do her part if you give her a chance. The Mann's Bone-Cutter gives *you* a chance to give *her* a chance. It gives you a better chance than does any other bone-cutter.

Mann's Green Bone-Cutters have been sold for the past twenty-five years, and there are more of them in use today than of all other makes combined. We have sold them for many years and have yet to find a dissatisfied customer.

Every machine is guaranteed, and must do the work. If you want to know more about them before purchasing ask for complete catalogue.



No. 5 B. M.

No. 5 C

The same as the No. 5 B, with a crank handle instead of a balance wheel. Capacity not quite equal to 5 B. Weight, 35 pounds. Price \$9.50.

No. 5 B

Exactly the same as the No. 5 B. M. except that it has no iron stand. The capacity is the same. Weight 60 pounds. Price \$12.50.

No. 7 New Model

Intended for flocks of 40 to 100 hens. Can be profitably used for 200 hens or more. Mounted on strong iron stand with large table for box or pan to receive cut bone. Weight 107 pounds. Capacity one-half to one pound per minute. Price \$18.50.

No. 9 New Model

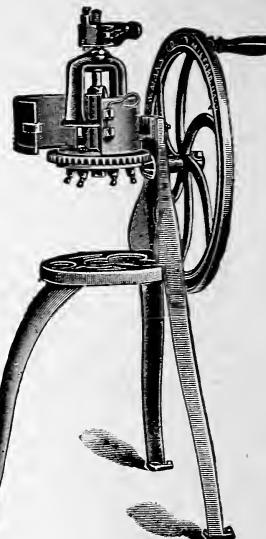
Intended for flocks of 100 to 300 hens. Weight 170 pounds. Capacity $\frac{3}{4}$ to $1\frac{1}{4}$ pounds per minute. Price \$28.50.

No. 11 Model

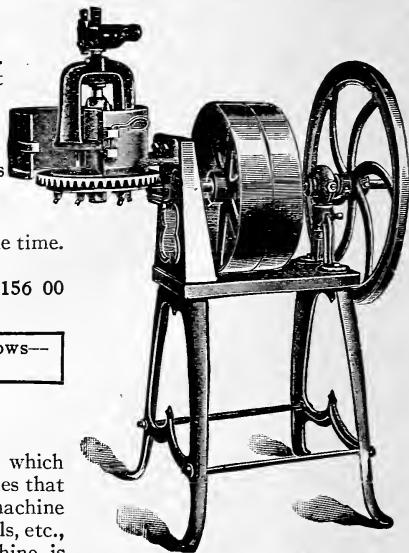
Intended for large flocks when the machine must be run by hand a portion of the time. Weight 215 pounds. Capacity 100 pounds and upwards per hour. Price \$40.

No. 12 Power Machine	\$50 00	No. 18 Power Machine	\$156 00
No. 15 Power Machine	100 00		

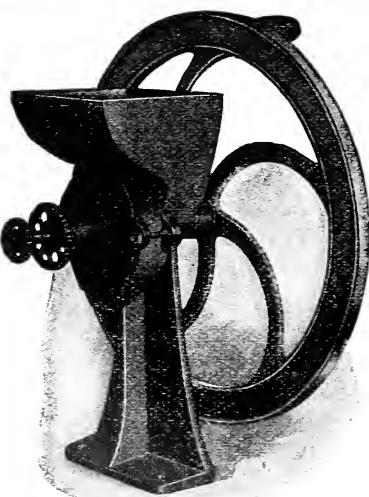
The Mann's has won more than 300 first premiums at expositions, fairs, and poultry shows—more than all other types put together



No. 7. Weight 107 pounds



No. 11. Weight 215 pounds



Stover Hand Grinding Mill

Stover Hand Grinding Mill

In this Mill are embodied all the good features of other hand grinding Mills to which have been added universal burs or grinding plates that are adjustable for grinding coarse or fine. This machine grinds oats, barley, rye, corn, peas, dry bone, shells, etc., for feeding to poultry. It is a well-designed machine, is strong and well made throughout and of excellent finish, has a 16-inch fly wheel and is light running.

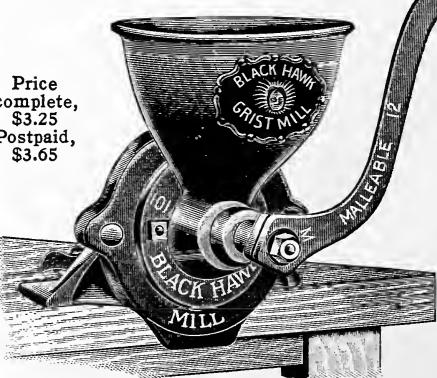
No. 32. Hand Power, capacity 1 to 2 bushels per hour, \$5.50; postpaid \$6.

No. 35-B. Belt Power, capacity 4 to 6 bushels per hour, \$9.50.

No. 35-B can also be operated by hand.

Black Hawk Grist Mill

Price complete, \$3.25
Postpaid, \$3.65



With a Black Hawk Mill you can crack corn or grind any kind of grain to whatever degree of fineness will best suit the age or condition of your fowls.

Grinds corn into meal, wheat into graham flour, rice or buckwheat into flour; in fact, an all-round household Mill that will grind fine or coarse.

Extra Grinders, per set, 60 cts. ppd.

No. 0 Wilson's Family Grist Mill**To Bolt to Bench or Table**

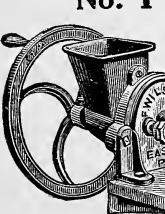
Diameter of hand wheel, 20 inches. Capacity, 1 pound in two minutes.

Especially made for grinding graham flour, rice, corn meal, coffee, spices, etc., for table use. Can also be adjusted in a second for cracking the grain if desired.

The grinding surfaces are **very hard** and ground off perfectly true on emery wheels. The shaft is **steel**.

With this Mill in your kitchen you can have fresh graham flour every morning for gems, and cornmeal for mush, etc., and you know how much more delicious they both are when freshly ground. You can also have for breakfast, the freshly cracked wheat which is so hard to buy in stores.

Grinding Plates, when worn out can be replaced at 90 cents per set. Weight 29 lbs. Price \$6.50

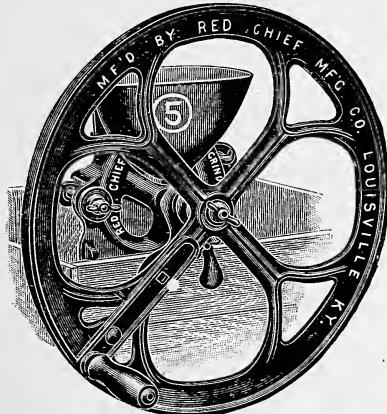
**No. 1 Wilson's Poulterer's Mill****Hand Power. For Grinding Dry Bone, Shell, and Corn for Poultry
To Bolt to Bench or Table**

Diameter of hand wheel, 20 inches. Size of hopper, $2\frac{1}{2} \times 3\frac{1}{4} \times 4$ inches.

This Mill will grind, or granulate, dry bones, oyster and clam shells, grit, gravel stones, old crockery, glass, charcoal, corn, walnuts, and all sorts of grain. Also splendid in

the house for grinding stale bread, crackers, roots, barks, etc.

The grinding surfaces are made of the hardest material, and will last for years. Weight, 33 pounds. Price \$6.50

**No. 5 Red Chief Mill**

Just the Mill for small poultry raisers.

Recent improvements make this the most satisfactory Mill on the market. Clamps or bolts to box as desired.

The only Mill that can be cleaned and adjusted in a moment's time without the use of a wrench.

An ideal Mill for cracking grain of any kind for poultry and stock. It combines all the elements of rapid work, perfect grinding and requires little power.

A fine Mill for grinding dry grain, cornmeal, graham flour, and spices.

Have extra hardened burs. Burs are self-sharpening—they cut, do not mash.

The balance-wheel makes the Mill run steady and with the least possible power to turn it.

Capacity, 2 to 4 bushels per hour.

PRICES

No. 5, with Balance Wheel	\$7 00
No. 10, with Balance Wheel and Stand	9 00
No. 2, with Crank only	5 00

No. 20 Red Chief Power Mill

For grinding cornmeal, graham flour, stock feed, etc.

An ideal Mill for grinding mixed feed.

With a speed of 300 to 450 revolutions per minute, will grind 10 to 20 bushels feed per hour; 3 to 5 bushels fine cornmeal per hour.

Power required, $1\frac{1}{2}$ to 2 horsepower gasoline engine or over.

A hand crank is used when engine is not running.

A child can grind a bushel of chicken feed by hand in 10 minutes.

Patent tension for regulating size of ground material, making change of burs unnecessary.

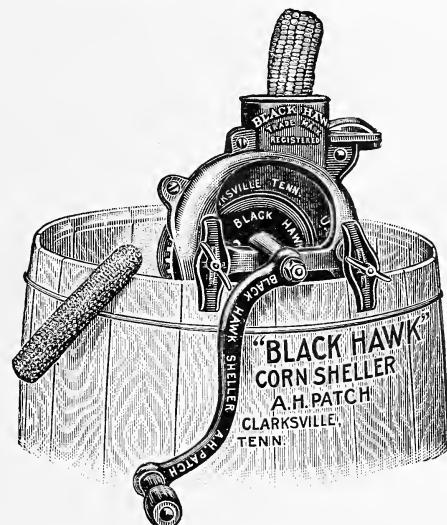
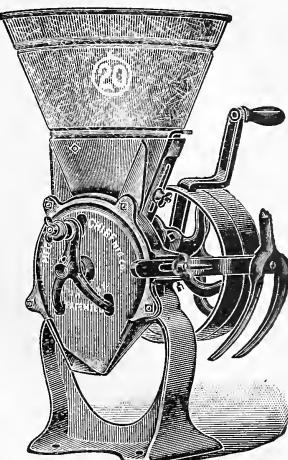
Tight and loose pulley, 10 inches in diameter, $2\frac{1}{4}$ -inch face.

Galvanized iron hopper. Reversible belt shift. Feed regulator. All bearings bronze bearing metal.

Height 27 inches.

No wrench or screw-driver needed in making adjustments.

Price \$21; with iron base \$24.75

**Black Hawk Corn-Sheller**

The Black Hawk Corn-Sheller has enclosed hopper and separator. This prevents scattering of the shelled corn. A wonderfully fast and easy running Sheller. Instantly fastened to barrel or box by two large strong clamps with wing nuts. Price \$2.75.

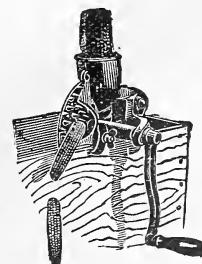
Red Chief Corn-Sheller

Has patent oval-shaped teeth, shelling the corn without cracking the grains. Shells clean, taking off less chaff than any other Sheller.

Clamps on barrel or tub as well as on box.

Requires no wrench. Tension directly on cob, not on hopper, which makes Sheller run very easy, no force being required to expand a hopper.

Price \$2.75



Norwich Automatic Feeder

Endorsed and recommended by the leading poultrymen, state colleges, professors of poultry husbandry, and students of poultry culture as the only perfect Feeder on the market. Operates with any grain feed or mixture; never out of order, and will last a lifetime.



In operating the Norwich Automatic Exerciser and Feeder, it is but necessary to fill the hopper with such grain feed as may be desired, straight or mixed, filling the feed-bar with either cracked corn or wheat, and adjust the valve at the bottom of the hopper to feed in such quantities as desired. Fitted with adjustable legs, the machine may be stood anywhere in the yard, pen, house, or on free range, and is adjustable for baby chicks or adult fowl. As a baby chick Feeder it has no equal. As the birds grow, the legs can be lengthened to meet their requirements so that one Feeder does for all sizes of birds.

The hopper being rain-proof, the feed is always dry and fresh. No matter how hard it rains, not a drop of moisture can enter it. The feed-bar, being under the deflector, is protected from rain as if under an umbrella, and in consequence the feed in it is always dry and inviting.

The machine is absolutely rat- and bird-proof, and eliminates completely the element of waste in the poultry plant, estimated by experts as high as 25 per cent. It reduces the labor of feeding to filling the hopper when empty, and increases egg-production as high as 18 per cent.

PRICES

	Each
No. 1. 8-quart Hopper.	\$5 00
No. 2. 14-quart Hopper.	5 50
No. 3. 20-quart Hopper.	6 50
No. 4. 32-quart Hopper.	7 50

The Peerless Self-Feed Hopper

HOW TO USE IT

An automatic pulley is supplied with every Peerless Hopper, which can be easily attached to any style of roof. This pulley grips the cord and holds the Hopper at any desired height.

Fill the Hopper with dry mash or grain, and hang it well above the floor or pen, high enough to compel the birds to arch their necks in order to reach the feed.

You cannot afford to continue the wasteful use of open boxes and pans for the feeding of poultry mash and grains.

It is the only Hopper that is absolutely rat-proof all the time, day and night, which needs no attention except refilling when empty.

PRICES

8-qt. size, for 10 to 15 birds.	Each \$1 75	Postpaid \$2 00
16-qt. size, for 15 to 30 birds.	2 50	2 75
32-qt. size, for 30 to 50 birds.	3 50	



The Apaco Poultry Feeder

This machine, made on the same principle as the Norwich, is listed in response to the demand of the small breeder, or back-yard poultryman, for a high-grade automatic Feeder at a low price. The machine is of the hanging type, complete with the all-important adjustable valve for regulating the feed discharge from the hopper, has nine quarts capacity, and is constructed of tight coated galvanized metal. With ordinary care will last a lifetime. Thousands of these machines are used in every part of the United States, and they may be relied upon as the best automatic Poultry Feeder that has ever been placed on the market at this price.

Made in one size only, 9 quarts capacity.

Price \$2; postpaid, \$2.25



“Bar-Nun” Dry-Mash Hopper

It Saves the Feed. Holds 15 quarts

It is inaccessible to rats or mice, yet easily accessible to poultry at all times. By its use, a constant supply of fresh, clean feed is always kept before them.

Used suspended by a spiral spring; furnished with hopper; clogging or packing of feed is prevented. The mash feeds down automatically as the poultry pick it away from the trough.

Poultry cannot perch on it or scratch mash out of it. Simply hang the hopper so that the birds have to reach up to pick out of the trough; this gives a clear floor-space and prevents them from picking over the mash.

Note the inward-sloping sides of the feed-pan—an exclusive feature of the “Bar-Nun” Hopper.

Price \$2.75; postpaid \$3



Improved Handy Hopper

The Improved Handy Hopper is made of galvanized iron throughout. All parts are spot-welded together. It is provided with hinged lid over both hopper and trough, making it rat- and mouse-proof, as well as dirt-proof.

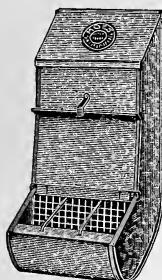
It is provided with a swinging front, adjustable to suit any kind of dry mash and which eliminates any possibility of clogging.

Hopper is 15 inches in height, 4½ inches in width, and made in four lengths.

PRICES

	Each	Postpaid
No. 1. 12 inches long.	\$1 75	\$2 00
No. 2. 18 inches long.	2 25	2 50
No. 3. 24 inches long.	2 50	2 85
No. 4. 36 inches long.	3 75	





Moe's Dry Mash Hopper

The curved bottom of the Hopper keeps the feed within easy reach of the birds. The gradual enlargement from the top to base prevents clogging. The wire grid and the wires running from the flange through the wire grid prevent any chance of the fowls throwing out or wasting the feed. The sloping cover prevents the birds from roosting on the Hopper, and when both covers are closed, it is rat- and mouse-proof. A trial will convince you that it is a Hopper of the greatest merit. Manufactured of heavy galvanized iron in three sizes.

	Each	Postpaid
No. 35. 8 1/2 inches wide.....	\$1 50	\$1 70
No. 36. 12 inches wide.....	2 00	2 25
No. 37. 24 inches wide.....	2 80	3 05

Sexton's Dry Feed Hopper

EASY TO FILL—NO WASTE—RAT-PROOF—DUST-PROOF



Open



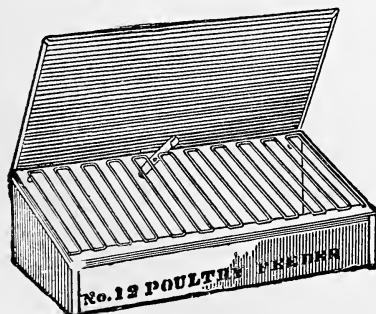
Closed

This Hopper is arranged to hang on the wall the desired distance from floor and never need be removed from the wall to be refilled. It is impossible to waste any feed as the pan at the bottom takes any feed that may be picked out and the last crumb can be used, therefore saving any waste. The body being covered keeps feed dust-proof, clean, and always dry.

Body made of galvanized iron and the grating is of round galvanized wire preventing the poultry from cutting their bills.

	Each	Postpaid
3-quart.....	\$1 25	\$1 45
12-quart.....	2 00	2 30
24-quart.....	3 00	3 40

Felker's Dry Mash Feeder

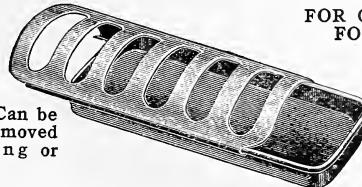


These Feeders are dirt- and rat-proof, and are protected from waste by an especially designed grid. Should be hung on the wall by two nails, as high as the fowl can reach with ease.

Each	Postpaid	Each	Postpaid		
12-inch.....	\$1 00	\$1 25	24-inch.....	\$1 25	\$1 50

Moe's Sanitary Feeding Trough

FOR GROWN FOWLS



Sliding Top Can be Quickly Removed for Cleaning or Filling

Suitable for dry feed, wet mash, or water. The top slides off, so the pan can be easily cleaned, and filled. Made of best quality galvanized iron, accurately stamped with dies. The edges of the slotted openings are all turned over and smoothly finished. No sharp or rough edges to injure the chicks. The feed saved by using Moe's Troughs will more than pay their cost in a short time. Made in three sizes.

PRICES

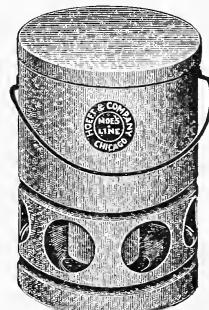
	Each	Postpaid
No. 21. 12 inches long.....	\$0 45	\$0 60
No. 22. 18 inches long.....	65	85
No. 23. 24 inches long.....	90	1 15

Moe's Pigeon Feeder

Pigeons are particular and fastidious feeders with a strong tendency to scatter and waste feed. Moe's Round Pigeon Feeder was especially designed to overcome this. Made of heavy galvanized iron, with feeding-holes properly spaced all around the hopper. The hopper has a slanting bottom leading through a large tube to the feeding-bottom. This feeding-trough, or bottom, is also made on a slant causing the birds to reach for the food and prevents them from billing the feed out and wasting it.

A practical, economical feeder which will soon save its cost.

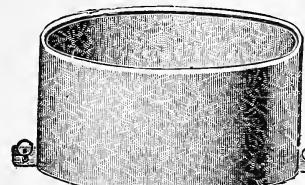
	Each	Postpaid
No. 105. Capacity 3 Quarts.....	\$1 00	\$1 15
No. 106. Capacity 6 Quarts.....	1 50	1 70



Moe's Rabbit Feeder

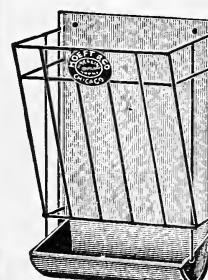
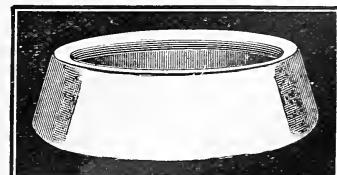
Made of galvanized iron. Rolled-in top prevents wasting. Dish held to the floor by simple locking device easy to remove for cleaning. Impossible for stock to tip over.

Price, 25 cts.; postpaid 35 cts.



Stoneware Rabbit Feeder

Each Ppd.
7 1/4-in. diam. \$0 35 \$0 50



Moe's Rabbit Feed Rack

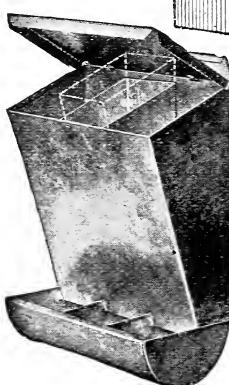
For holding roots or hay, alfalfa, clover, etc. It prevents scattering hay and wasting. The round trough at the bottom catches the small tender leaves. Feed saved soon pays for the Rack.

Price 75 cts.; postpaid 90 cts.

The 1—2—3 Poultry Feeder

Used for dry mash, beef scrap, grit, shells, or any kind of dry feed. It is made with a separator. When used for one kind of feed take out separator; for two kinds of feed, put separator in one end; for three kinds put separator in center, when you have three feeders in one. The fowls cannot waste the feed.

Price \$1.50;
postpaid \$1.70



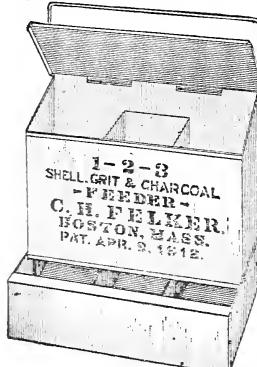
O.K. Grit and Shell Box

Chickens should have grit, oyster shell, and charcoal always before them; and for this purpose, this Grit and Shell Box is indispensable.

It is made of galvanized steel, with three compartments.

Height, $7\frac{1}{2}$ inches; width, 6 inches; depth (front to back), 4 inches at bottom and 2 inches at top.

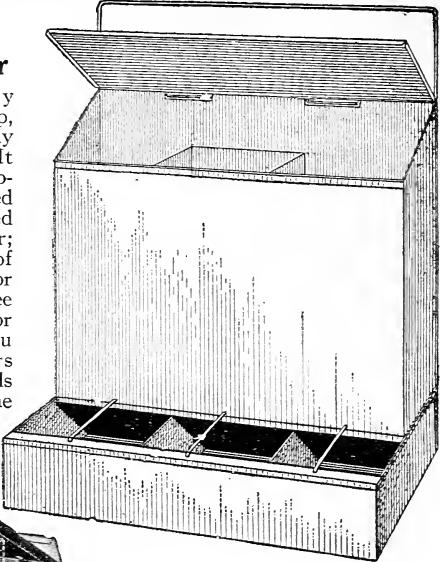
Each Postpaid
Chick Size... \$0 75 \$0 85
Hen Size.... 1 25 1 40



The 1—2—3 Shell Grit and Charcoal Feeder

A very convenient size for a pen of fowls. Will serve for one, two or three kinds of feed by using the separator.

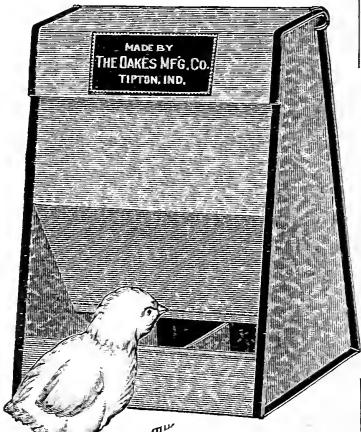
Price 90 cts.; postpaid \$1.05



Sexton Grit and Shell Box

Made of galvanized iron with hinged cover. The bottoms of these boxes are rounded, which prevents the grit from clogging. Also arranged with portable partitions, so that they may be made into one, two or three compartments as desired.

	Capacity	Each	Postpaid
No. 1.	4 quarts....	\$1 00	\$1 20
No. 2.	6 quarts....	1 25	1 50



Moe's Grit and Shell Box

The feeding of grit, ground shells, and charcoal is now recognized as an essential part of the diet, to keep fowls in healthy, prime condition.

Can also be used as feed-hoppers for little chicks.

Made of heavy galvanized iron in three sizes. The No. 45 for baby chicks has a square bottom, the other sizes have round bottoms. No solder used in their construction.

	PRICES	Each	Postpaid
No. 45. Two compartments.....	\$0 45	\$0 55	
No. 9. Three compartments.....	1 00	1 20	
No. 90. Four compartments.....	1 35	1 60	

The Prairie State Dry Mash Hopper

The Prairie State Dry Mash Hopper is a good size—18 inches high, 12 inches wide, and has a capacity of 25 pounds of dry mash. It may be used for feeding grains, mashes, or beef scrap. Has a new improved non-wasting apron, 5 inches wide, that prevents the fowls from spooning out and wasting the material. There is less waste with this Hopper than any we have ever seen.

Price \$2.75; postpaid \$3.10



Little Putnam Stove for Poultry Fountain

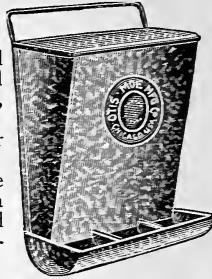
This little device will keep water from freezing in zero weather. It holds 6 cts. worth of oil and burns a month without filling or trimming. Fool proof and fire safe. Used under any can, crock or fountain.

Price \$2, postpaid

Artificial Light for Poultry

Poultry-keepers in all parts of the country, from the Atlantic to the Pacific, have proved beyond question that the use of artificial light in laying-houses will double and treble the fall and early winter egg-yield. College authorities and practical poultry-keepers all are agreed that this is one of the most *Revolutionary Discoveries* in modern times. Artificial Lighting is not a *Forcing Process*. It simply prolongs the hen's working day, thus giving her more natural and more healthful conditions—and increased egg-production occurs as a natural result.

If electric current is not available, use the Storm King Lantern shown on page 175. Read the latest on this subject in the book "Use of Artificial Light To Increase Winter Egg-Production," by G. M. Curtis. This book gives full information on every important detail of the practical use of lights. Contains 112 pages, five pages of instructive, helpful color plates. Price \$1.50 postpaid.



Moe's Round Baby Chick-Feeder



A great feed-saver, as the little chicks cannot get into it and contaminate the feed. Can also be used for water. This is not a novelty, but a practical, well-made, feeding device that will last for years. Made of the

best grade of galvanized iron. Chicks cannot upset it.

Each	Postpaid	Each	Postpaid		
No. 11. Small.	\$0 15	\$0 25	No. 12. Large.	\$0 25	\$0 35

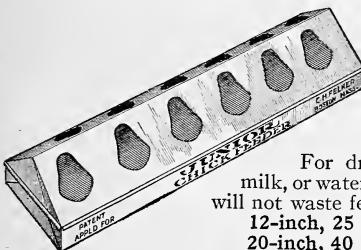


O. K. Chick-Feed Trough

The Trough is made on a half circle so that every bit of feed can be easily eaten out of it.

Over the Trough is a gable-shaped grate which prevents the chicks from getting into it and wasting or fouling the feed. This grating is a separate piece and slides on and off easily. It is stamped into shape with dies, and is ribbed as shown in the cut, making it strong and substantial.

Each	Postpaid	
10-inch Trough, with Grate.....	\$0 30	\$0 40
20-inch Trough, with Grate.....	45	60



The Junior Chick-Feeder

One of our most popular Feeders

For dry mash, hard grain, sour milk, or water; is practical and sanitary; will not waste feed. Chicks cannot foul it.

12-inch, 25 cts.; postpaid 30 cts.
20-inch, 40 cts.; postpaid 50 cts.

Apex Chick-Feeders

Apex Feeders are made for brooder purposes, and are so arranged that the feed is always directly under the holes through which the chicks feed. Are made with hinged top, which gives free access to fill or clean. Made in sizes of 6 and 12 holes.

Each	Postpaid	Each	Postpaid		
6 hole	\$0 50	\$0 60	12 hole	\$0 90	\$1 05



The Keystone Chick-Feeder

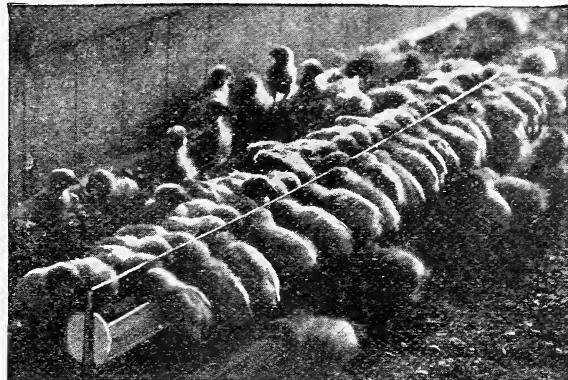
Poultrymen swear by this Feeder for their young stock. Suitable for dry or wet mash. Made of heavy galvanized iron. Over the trough is a specially constructed gable-shaped grate, which prevents chicks wasting the contents or climbing into their feed. Special construction of fitting top prevents sticking. Can be easily removed and put on. Made in two sizes. Each Postpaid

10-inch Trough, with Grate.....	\$0 35	\$0 45
20-inch Trough, with Grate.....	60	75

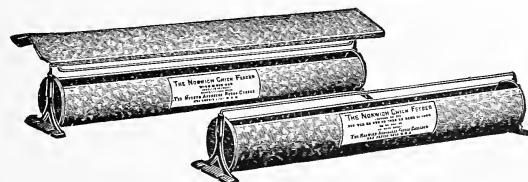


The Keystone Chick-Feeder

The Norwich Chick-Feeder



For the purposes for which it is intended, the Norwich Chick-Feeder is unquestionably the best device that has ever been invented. It is used for feeding mash, chick-feed, or sour milk. The rod crossing the top of the machine prevents the chicks from getting into the feed and its use eliminates absolutely all waste. The machine is made of tight coated galvanized sheeting, malleable iron ends, securely riveted, and is the strongest and best Feeder made.



For outside use the Feeder is made with a removable rain-top which not only protects the feed from showers followed by a hot sun that quickly sours the mash and is responsible for losses running into the thousands, but also prevents the older fowls from appropriating the chicks' feed—the cause of many a stunted flock.

Made in one size only—

20-inch with Rain-Top.....	\$1 00	\$1 20
20-inch without Rain-Top.....	75	85

McCandlish Improved Chick-Feeder



Equipped with adjustable partitions for various kinds of feed. An ideal drinking receptacle also. Made of galvanized iron. No rough edges; waste impossible; can't capsizes.



Drinking

Revolving rod prevents the chicks from perching upon it, making the Feeder absolutely sanitary.

Size	Each	Postpaid	Size	Each	Postpaid
12-inch	\$0 40	\$0 45	30-inch	\$0 75	\$0 90
20-inch	50	60			

If you have never tried "O. K." Poultry Litter, you do not know what you are missing. See page 185

Moe's Single Feeding-Troughs

For Chicks and Growing Stock

Sliding Top



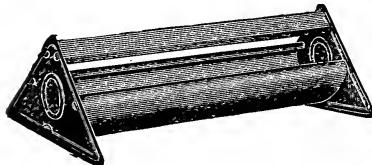
Easily Cleaned

Made of best quality galvanized iron, accurately stamped with dies. No sharp or rough edges to injure the chicks. Made in three sizes. Can be hung on the wall.

	Each	Postpaid
No. 55. 12 inches long.....	\$0 35	\$0 45
No. 56. 18 inches long.....	45	55
No. 57. 24 inches long.....	65	80

Moe's Double Feeding-Troughs

	Each	Postpaid
No. 58. 12 inches long.....	\$0 50	\$0 65
No. 59. 18 inches long.....	65	80
No. 60. 24 inches long.....	75	95

**Economy Chick Server**

Notice how the Economy Chick-Server is made. Edge of trough turned inwards prevents chicks from throwing out the feed. Even the fine meal is saved. Wide triangular ends make upsetting impossible. Bar across top keeps chicks out of the trough. No soldered joints—therefore no broken servers. Strong, durable, handy, handsome, neat. All parts galvanized. Used for mixed feed, dry mash, grit, shell, charcoal, etc. 20-inch, each 30 cts.; postpaid 40 cts.

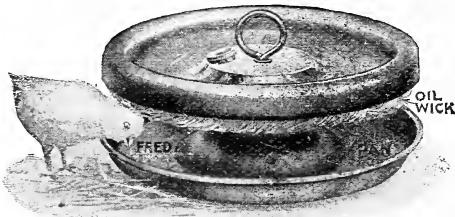
chicks from throwing out the feed. Even the fine meal is saved. Wide triangular ends make upsetting impossible. Bar across top keeps chicks out of the trough. No soldered joints—therefore no broken servers. Strong, durable, handy, handsome, neat. All parts galvanized. Used for mixed feed, dry mash, grit, shell, charcoal, etc. 20-inch, each 30 cts.; postpaid 40 cts.

**Moe's Sanitary Brooder Fountain****Baby Chicks Can't Get Wet**

Economizes on space in brooder by being three-cornered. Placed in a corner, it cannot be upset. If desired, can be hung up by hook on top of fountain.

Capacity, 1 quart each.

Price, 45 cts.; postpaid 55 cts.

Automatic Chick-Greaser
EVERY CHICK ITS OWN DOCTOR

It is the large lice which collect on the heads of young chickens which cause them to droop and die. Formerly, the only way to get rid of these lice was to catch each chick and rub grease on its head, but this slow and tedious process is not necessary since the invention of the Automatic Chick-Greaser.

The wick around the upper part of the Greaser is saturated with oil (a mixture of two-thirds lard and one-third kerosene or black oil) and every chick which eats out of the pan will get its head thoroughly greased in a very few minutes.

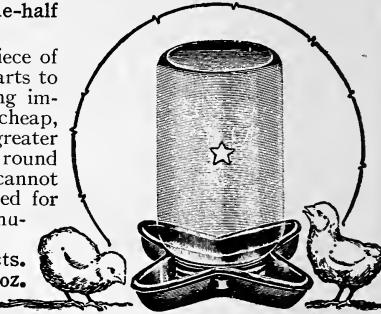
Price \$1; postpaid \$1.15

The Star Jar Fountain and Feeder

Will fit pint, quart or one-half gallon Mason jar

Manufactured of one-piece of non-rusting metal. No parts to come unsoldered. Leaking impossible. Convenient, cheap, and sanitary. Provides greater drinking surface than the round fountain. Little chicks cannot get drowned. Can be used for feed as well as water. Manufactured in one size only.

Price, without Jars, 10 cts. each; postpaid 15 cts.; doz. \$1.10; postpaid \$1.30.

**Automatic Fountain and Chick-Feeder**

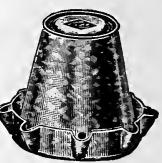
Patent applied for

	PRICES	Postpaid
Each.....	\$0 10	\$0 15
Doz.....	1 10	1 30

Economy Chick Fount METALLIC RUST-PROOF

Diameter of pan, 5 inches. Height, 4 inches. Holds one pint. An excellent Fountain for the little chicks. Enough clean water all the time, but chicks cannot get into the pan.

	PRICES	Postpaid
Each.....	\$0 20	\$0 25

**Oakes Two-Piece Fountain**

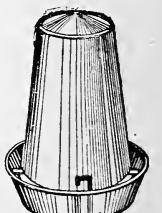
This Fountain consists of a cone-shaped bucket or can and a stamped pan which forms the base and the trough from which the fowls drink. Both parts are made of galvanized sheet steel and all parts are well soldered.

	Each	Postpaid
1-quart.....	\$0 30	\$0 35
2-quart.....	45	55
3-quart.....	60	70

**Felker's Cone Fountain**

For chickens and pigeons. A new and practical two-part attachable Drinking-Fountain. It being attachable makes it easy to move from place to place and it is not easy to tip over.

	Each	Postpaid
1-quart.....	\$0 35	\$0 40
2-quart.....	45	55



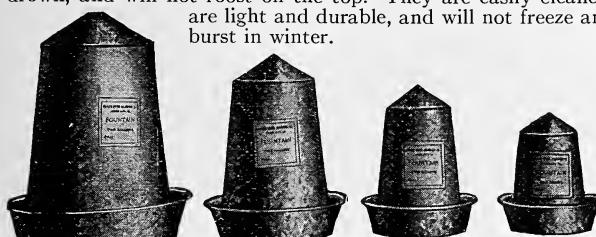
Pat. Applied For

BEES AND POULTRY

A good combination, for during the season when poultry requires attention bees do not. See pages 146 and 147.

Prairie State Drinking Fountains

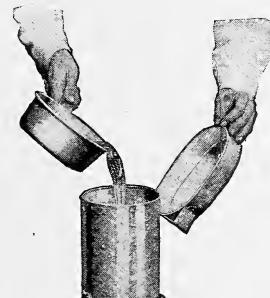
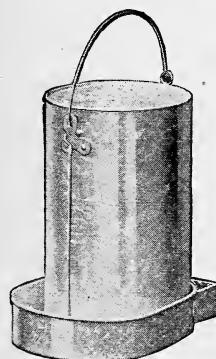
The chicks cannot get into the basin to foul the water nor to drown, and will not roost on the top. They are easily cleaned, are light and durable, and will not freeze and burst in winter.



	Each	Postpaid
1-quart.....	\$0 30	\$0 40
2-quart.....	40	50
1-gallon.....	50	65
2-gallon.....	75	1 00

Keystone Drinking Fountains

Will sit alone while being filled, and can be filled from bucket or faucet. Bail handle makes it convenient to carry.



Method of filling

These Fountains are made of black sheets and galvanized afterwards. No solder is used in making them.

The construction of this Fountain has made it the favorite and it is now considered the most practical, convenient, and one of the best on the market.

Hangs above floor or ground so that water is always clean.

Easy to Fill—Easy to Clean. Made in Four Sizes

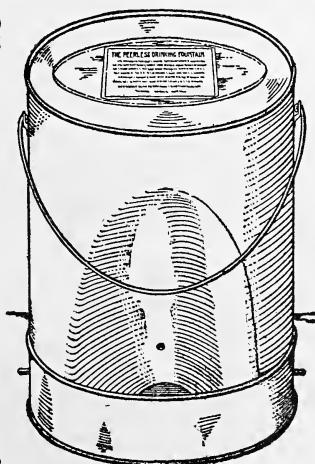
Size	PRICES	Postpaid
1-quart.....	\$0 50	\$0 60
2-quart.....	65	75
1-gallon.....	90	1 10
2-gallon.....	1 25	1 50

The Peerless Sanitary Drinking Fountain

The water is always pure as it is protected from dirt and filth. The fowls cannot injure their combs when drinking; easy to clean and fill; simple in construction; durable and practical. It is adjustable; the top and bottom can always be made to fit. Should it work too loose, take the Fountain apart and pull sides out; if too tight, press sides in.

PRICES Each Postpaid

1-quart.....	\$0 40	\$0 45
5-quart.....	85	1 00
10-quart.....	1 25	1 50



Patented January 18, 1910

The Peerless Heater

For Winter Use. Fits All Fountains

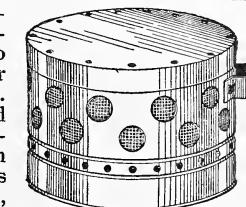
The water will never freeze or become too warm. Easy to care for. Costs but little to run.

The base is an oil-well holding one pint of kerosene which will last one week (day times). An air-space between oil-well and heat-chamber makes it impossible for gas to form. In heat-chamber is small burner connected to oil-well by brass pipe. Around the burner is a circular shield which protects the light and concentrates the heat to a small space on fount; in this way it never overheats the water. Inside, next to outside wall, is a wire gauze that prevents anything from being scratched into the Heater.

Patented

It is so ventilated that the light receives just the right amount of oxygen to burn smoothly without smoke. It is impossible to get the outside wall of Heater warm.

Price, with Cover, \$2; postpaid \$2.25

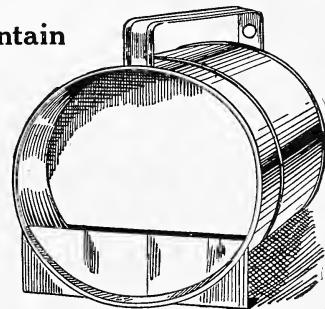


The Boston Fountain

Easily Filled. Easily Cleaned
Nothing to Get Out of Order

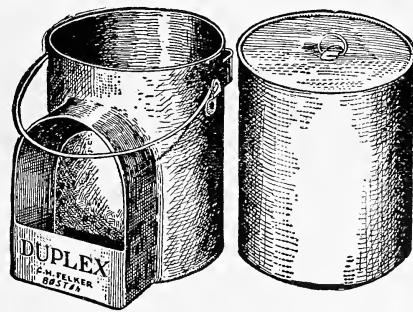
This Fountain is very popular and gives excellent satisfaction. It is handy and very durable, being made of galvanized iron, double-seamed together.

	Each	Postpaid
1-quart.....	\$0 50	\$0 60
2-quart.....	65	75
4-quart.....	85	1 05
8-quart.....	1 25	1 50



Duplex Fountain

The latest and most practical sanitary Fountain on the market. This is a double fount, keeping the water clean and pure. Easy to care for. Made in two sizes.

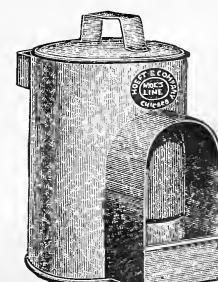


	Each	Postpaid
4-qt.....	\$1 00	\$1 15
8-qt.....	1 40	1 65

Moe's Improved Wall Fountains

Made of heavy galvanized iron, in three sizes. The covered outlet keeps out dust and dirt, and the outlet is further protected by a removable plate which prevents any floating rubbish from being drawn into the reservoir.

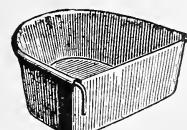
	Each	Postpaid
No. 97. 2-qt. capacity.	\$0 50	\$0 60
No. 98. 1-gal. capacity.	75	95
No. 99. 2-gals. capacity.	1 00	1 25

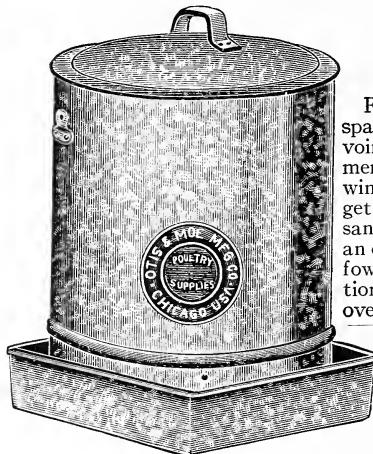


Feed- or Water-Cups for Coops

Made of galvanized iron. They are made to hang inside of exhibition coops or cages, and can be used for birds or small pet animals.

	Each	Postpaid
0 4 1/4 x 3 1/8 x 2 1/4 in.....	\$0 20	\$0 25
1 5 1/8 x 3 1/2 x 2 1/2 in.....	25	30





Moe's Top-Fill Fountain

Fills from the top. Dead air-space between cover and reservoir keeps water cool in the summer, and prevents freezing in winter. There are no valves to get out of order. It is thoroughly sanitary and as easily cleaned as an ordinary pail. It protects the fowls from their own contamination. It does away with slopping over when being filled. It supplies just enough pure water and no more. Manufactured of heavy galvanized iron in three sizes. Can be used for two pens at the same time.

PRICES

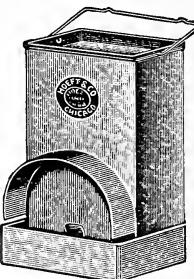
	Each	Postpaid
No. 1. 1-gallon	\$1 75	\$1 90
No. 2. 2-gallon	2 40	2 65
No. 4. 4-gallon	3 25	3 65

Moe's Drop-Bottom Wall-Fountain

A practical, durable Fountain. Easy to fill and easy to clean. Made of best quality galvanized iron. May be hung on the wall out of the litter and dirt.

Suitable for chicks, fowls or pigeons. Fitted with wire handles, so that two or more Fountains, back to back, can be carried in one hand. Made in three sizes.

	Each	Postpaid
No. 40. 2 quarts	\$0 90	\$1 10
No. 41. 1 gallon	1 15	1 30
No. 42. 2 gallons	1 35	1 55

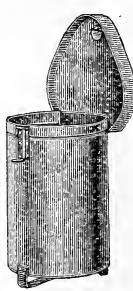


Oakes Improved Drop-Bottom Fountain

This Fountain combines the good qualities of all other similar Fountains.

The pan, which forms the trough, is hinged at the back and fastened by a catch in front. The flat back allows the Fountain to be firmly placed against the wall and the drop bottom enables the fountain to be thoroughly cleaned and kept in a sanitary condition.

Closed The Fountain is made in both single wall and double wall style. In the double wall Fountain the two cylinders forming the body of the Fountain are sealed, making a dead air-space between them. This construction is similar to the thermos bottle and gives the very best protection from both heat and cold.



	PRICES	Each	Postpaid
2-quart, Single Wall	\$1 00	\$1 10	
1-gallon, Single Wall	1 25	1 40	
2-gallon, Single Wall	1 50	1 70	
4-gallon, Single Wall	2 25	2 50	
1-gallon, Double Wall	2 50	2 65	
2-gallon, Double Wall	3 00	3 20	
4-gallon, Double Wall	3 50	3 75	

The Norwich Automatic Air-Lock Fountain

Recent tests of the Missouri State Board of Poultry Culture have proved conclusively that unless birds are furnished a continuous supply of water their egg-production is curtailed 50 per cent and the loss is the same in all the varieties. The bulletin on the subject further states that in winter egg-production, water is actually worth in dollars and cents just as much as grain.

The Norwich Automatic Air-Lock Fountain furnishes a continuous water-supply with the chill removed, and the birds will consume from four to ten times the amount of water from it than where water is furnished from an ordinary vessel.

Eggs are 74 per cent water, and a moment's thought will show the vast importance of water in egg-production.

This machine will double the production of birds given cold water once, or twice a day. The Fountain is guaranteed frost-proof to 20 degrees below zero, and has been operated in the extreme north at 32, 47, and 60 degrees below zero, and furnishes a continuous water-supply at just the right temperature to induce the birds to drink.

It is hygienic, easily cared for, top filled, positive in action, with no working parts and nothing to get out of order. As a summer fountain it has no equal, as the water from it is much cooler than the surrounding atmosphere. With ordinary care the Fountain will last for years and give absolute satisfaction summer and winter.

We have sold a large number of these Fountains and cannot speak too highly of their merits. Made in one size only, 5 gallons capacity.

	PRICES	Each	Postpaid
Complete with Burner Base	\$6 00	\$6 40	
Without Burner Base	3 50	3 85	
Burner Base Only	3 50	3 85	

Write for Special Circular

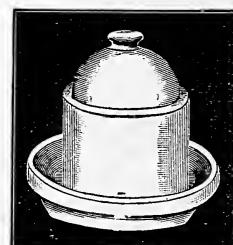
Ideal Sanitary Fountain

The simplest, handiest, and most practical Fountain made. Keeps water the right temperature all the year. Has no lamps to trim, and valves to get out of order. Saves time, labor, and worry, and costs nothing to run.

The Fountain is made of galvanized iron, and is similar in construction to the fireless cooker, being packed with a non-conducting material to retain the temperature of the water. The drinking cup, which contains the only water exposed, forms a connection between the outer and inner can, and does not project beyond the outer can, there being no possible chance for droppings, the cause of much disease, to get into the water. Keeps water cool in summer and warm in winter.



	PRICES	Each	Postpaid
2-gallon	\$3 75	\$4 00	
3-gallon	4 25	4 50	
5-gallon	5 50		



Stoneware Poultry Fountains

	Saucer detached from top	Each
1/4-gallon		\$0 50
1/2-gallon		55
1-gallon		70
2-gallon		85

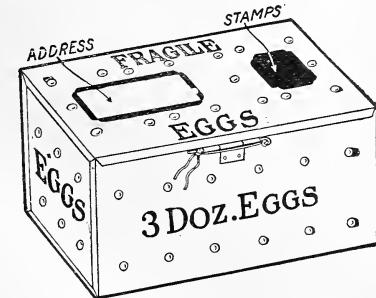
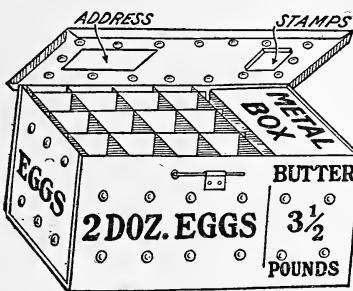
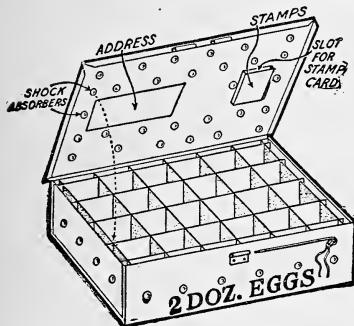
By Freight or Express Only

Aluminized Metal Egg and Butter Carriers

FOR PARCEL
POST

No Breaks. Indestructible. Requires no Wrapping. Interchangeable Address Card Eliminates Rewriting. Return Postage Can Be Paid in Advance. Chuck Full of Economy

The black square on the lid is for stamps, removable with water, or stamp may be placed on a slip of paper and placed in slots over black square.



They solve the problem of shipping eggs, butter, and other farm products by parcel post. They are made for continued use, being strongly constructed but light in weight.

The best and most up-to-date parcel post crate ever made. Once used—always used. Thousands are working and none ever known to wear out. Praised by every owner. Postage no more than on frail paper cartons.

Combination Crates

Any size Combination Crate desired can be supplied to carry eggs with metal containers to hold butter, lard, sausage, honey, cut-up chicken, country sliced ham, etc. Any of these Combination Crates will be found surprisingly satisfactory. Butter, lard and other soft products will not melt or run in warmest weather.

Durability

The life of these Crates has not been determined. After two years' usage, they are in good condition for continued service.

Do not require outside wrapping for mailing. A short string only is needed for tying "pin" which holds lid securely closed.

Postage within the Second Zone or 150 Miles

	Empty	Filled	Empty	Filled
2-doz. size....	\$0 07	\$0 09	\$0 08	\$0 16
3-doz. size....	07	11	3 doz. eggs, 3 1/2 lbs...	08 16
4-doz. size....	07	13	2 doz. eggs, 3 1/2 lbs...	07 14

Supplies. A complete set of supplies, consisting of Fillers, Corrugated Board, 10 Stamp Slip Papers, 100 Wrapping Papers, and 2 Address Cards for 1 1/2-, 2-, 3-, and 4-dozen sizes, 50 cts.; postpaid, 55 cts.; 6-dozen size, 60 cts.; postpaid, 65 cts.

Droz Pull-the-String Box and Folding Egg-Tubes

The best corrugated egg box on the market. They are made of double face corrugated paper board with a resistance test of 175 pounds to the square inch. When packed with the Droz Folding Egg Tubes they can withstand a heavy pressure on ends, top or bottom without crushing.

The Droz Folding Egg Tube is the secret of the box. Eggs packed in this tube are protected from breaking by the slots in the tube which hold the eggs firm without pressure. The eggs do not come in contact with one another nor do they touch the top or bottom of the box.

No Breakage. No Wrapping Easily Packed

Capacity	Price	Postpaid
2-doz. size.....	\$0 35	\$0 41
3-doz. size.....	45	52
4-doz. size.....	55	62
6-doz. size.....	75	83
8-doz. size.....	80	89
10 doz. size.....	1 00	1 10
12-doz. size.....	1 10	1 22
15-egg size.....	20	26
30-egg size.....	35	42
50-egg size.....	55	63
100-egg size.....	85	95

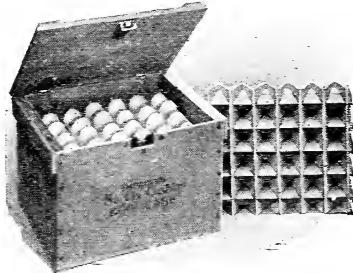
Combination Egg and Butter Box

Two Dozen Eggs and Four Pounds of Butter, each 70c., postpaid 77c.



Surety Wooden Egg-Case

Easier and quicker to pack than cases equipped with ordinary fillers. Will pay for themselves in two or three shipments by the saving in breakage.



The Surety Egg-Case is constructed of only the best of planed lumber. The ends are of solid one-piece construction with grooved handles, and are reinforced with strips of wood so attached as to prevent the sides from loosening. The sides, top, bottom and partitions are of tongue-and-groove construction. The double-jointed link hinges riveted on the inside allow

the cover to turn back without breaking off. It also has a snap catch lock and a small hole cut in the cover and side for sealing with a wire seal.

The patented Surety Egg-Trays, inverted one above the other, hold the eggs in double pyramid cushion pockets and prevent the eggs from coming in contact with one another or with the walls of the case. They also prevent the eggs from rattling about.

Surety Egg-Cases may also be used very successfully in storing eggs for hatching, as the eggs may be turned from day to day, requiring merely a turn of the case. This may be done without fear of breakage, even when the cases are only partially filled.

According to the express regulations, the standard or straight fillers may be used but once. "Surety" trays will last about as long as the cases without renewal.

Pronounced by the trade the safest, strongest, and neatest case ever produced.

Ready for immediate use when delivered.

Prices and Average Weight: Each Postpaid

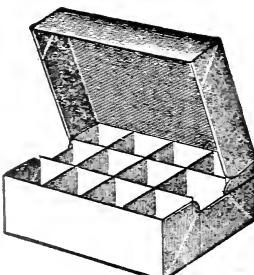
2-dozen size.....	4 1/2 lbs.	\$1 35	\$1 45
4-dozen size.....	6 lbs.	1 80	1 95
6-dozen size.....	7 3/8 lbs.	2 00	2 15
8-dozen size.....	8 1/2 lbs.	2 25	2 40
10-dozen size.....	9 1/2 lbs.	2 50	2 70
12-dozen size.....	10 3/8 lbs.	2 75	2 95
16-dozen size.....	12 3/8 lbs.	3 25	3 50

Extra trays, 12-egg size (for the 2-dozen size cases), \$3.50 per 50 sets of two trays each, shipped flat. Extra trays, 24-25-egg size (for all other sizes), \$5.75 per 50 trays, shipped flat. On all orders for less than 50 sets, add 10 cts. for wrapping.

Victor Folding Egg-Box

One dozen size—No printing

A carton with a cover made in such form as to exclude all dirt, with every corner reinforced, and so constructed as to make wrapper, string, or any fastener unnecessary. This box is far superior to the common folding carton.



PRICES

12 Boxes.....	\$0 30	Postpaid
50 Boxes.....	1 15	1 25
100 Boxes.....	2 00	2 20
250 Boxes.....	4 25	
500 Boxes.....	7 50	
1000 Boxes.....	14 00	

Self-Locking Carton

It is good business to market your fine eggs in first-class Egg Cartons and your service to your customers is not complete without Self-Locking Egg Cartons—the Quality Cartons of patented construction, which bring out the merits of your eggs to the fullest advantage.



The very best prices for your good eggs and Self-Locking Cartons form the right combination.

Special Features

Quick, easy set-up.

Patented self-locking cover—no further wrapping or tying with string and no seals required, although seals may be used, affording double protection.

Cartons are ventilated, allowing free circulation of air through the box and around each egg, an important factor in assuring the eggs reaching your customers without deterioration in quality.

Pack 30 dozen to the regulation egg-case—also suitable for use with Humpty Dumpty crates for express or parcel post shipment. Assures delivery without breakage loss. Your customers cannot but be pleased with the appearance of the eggs in the cartons. You will clinch the good will of your trade.

Read one of the many letters from users of Self-Locking Cartons:

"Relying to your letter of recent date, wish to state that we have found the Self-Locking Carton to be very satisfactory. It's attractive and helps sell the eggs.

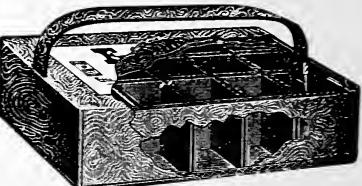
"I have no improvements to suggest as I believe that you have the most complete and best carton that it is possible to make."

Postpaid	Postpaid
12 Boxes..... \$0 35	\$0 40
50 Boxes..... 1 40	1 50
100 Boxes..... 2 50	2 75
250 Boxes.....	\$5 00
500 Boxes.....	9 25
1000 Boxes.....	17 50

The Eyrie Egg-Box

The best device yet found for shipping fancy eggs safely by express or parcel post.

This Egg-Box is manufactured mainly for shipping settings of eggs. It is made from jute board, and partitioned off with double-faced corrugated paper. The handle locks the box, making it pilfer proof.



PRICES

No. 1. Holds 15 Eggs.....	Each \$0 35	Postpaid \$0 40
No. 2. Holds 30 Eggs.....	50	55



Master Breeders' Chick Box

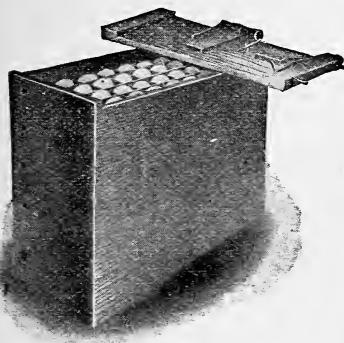
A safe and convenient carrier for shipping baby chicks either by express or parcel post. Made according to Association standards and are full 5 1/2 inches in depth. Covers are neatly printed in two colors.

Each	Postpaid	Doz.
25-Chick size..... 11 x 9 x 5 1/2 in.....	\$0 20	\$0 25
50-Chick size..... 18 x 11 x 5 1/2 in.....	25	30
100-Chick size..... 22 x 18 x 5 1/2 in.....	35	45

Special prices on 10 doz. lots on request.

BEES AND POULTRY. A GOOD COMBINATION.
See pages 146 and 147

Successful Handy Egg-Crate "JUST LIKE A SUIT-CASE"



Made of galvanized iron, except the cover—will last a lifetime. Light in weight; size, 17 inches long, 8 inches wide and 13 inches deep. Holds 15 dozen eggs; has adjustable top that fits into crate any depth desired. This feature is very desirable because you can pack 1 dozen eggs as well as 15 dozen, and prevent them from rolling around and breaking—adjustable top holds them in place no matter whether the crate is one-fourth, one-half or entirely full.

Particularly handy for those who go to market in a buggy, because the Crate is small enough to set in the bed back of the seat or in front and leave plenty of room for the feet. When the eggs are delivered the boxes can be folded, placed in the bottom of the crate and the crate filled with groceries or other purchases.

1 Crate Complete, with Fillers \$2; postpaid \$2.25
Fillers for above, per set 50 cts.; postpaid 60 cts.

Humpty Dumpty

The best, cheapest and most convenient egg-carrier in existence

*No time wasted
No disputed count
No broken eggs*

They are packed in bundles, complete with fillers.

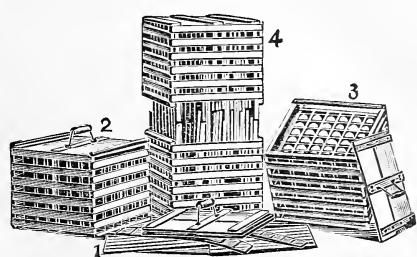


Fig. 1, folded flat; Fig. 2, set up closed; Fig. 3, set up open; Fig. 4, shows half dozen complete, ready for shipment.

PRICES

	Each	Postpaid
3-dozen size.....	\$0 40	\$0 50
6-dozen size.....	50	60
12-dozen size.....	60	70
30-dozen size.....	1 00	
Extra Fillers, 5 cts. each, 50 cts. per doz.; postpaid		55 cts.

BABY CHICKS

Get our prices before placing your order. All leading breeds from high-bred stock. Beginning early in March will furnish chicks until the end of the season late in June.

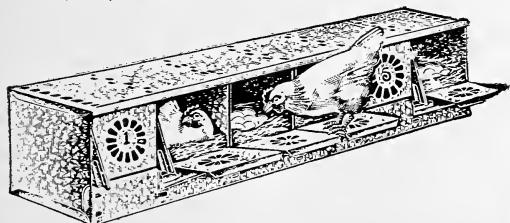
Moe's Trap-Nest Front

This new, inexpensive and useful device meets a popular demand, and has proved a wonderful seller. It places Trap Nests within the reach of all, for with its use an old orange-box can be converted into a double trap nest at a cost of a dollar. They are simple in operation with no small parts to get out of order. The front works on hinges, making it easy to remove the birds or clean the nest. They also give the breeder the opportunity of using the size nest best adapted to his birds with a uniform trap feature suitable for any breed. Manufactured from galvanized iron, 11 inches wide, 12 inches high.

No. 63, complete, 50 cts., postpaid, 60 cts.

Knudson Lice-Proof Nest

This nest is made in sets of four and six nests to the set. Each individual nest measures about 12 inches each way. As the metal of which they are constructed occupies practically no space, the nests are about as roomy as a wooden nest 14 x 14 inches.



The nests are separated by metal partitions, and each individual nest is provided with a drop door, which, when open, forms a ledge or perch in front of the nest. If these doors are closed at night, they will prevent chickens from roosting on them, and the setting hen is protected from outside annoyance if the door is kept closed.

Ample ventilation is provided for.

	Each	Each
No. 14. Set of 4 nests.....	\$4 50	\$4 25
No. 16. Set of 6 nests.....	5 50	5 00



Wire Hens' Nests

Made of coppered steel wire, with flat steel ribs, and heavy top wire, all copper finish.

Provides a clean, sanitary nest for the setting hen. Easily kept free from vermin. Intended to fasten to wall with nails or screw-hooks. Can be readily changed and filled with fresh straw or hay.

	Each	Postpaid
No. 300. 13 inches diam., 6½ inches depth.....	\$0 20	\$0 30
No. 301. 14 inches diam. 7 inches depth.....	25	35



Clay Pigeon Nest

Unglazed

9-in. diameter, each 30 cts., doz. \$3.
By Express or Freight.

The liberal use of Carbola and "B-K" will keep away the lice and mites, as well as contagious diseases.

Why Not Keep Bees? They require less room and less attention than poultry, and solve their own food problems. See pages 146 and 147, and write us for large illustrated catalogue of Bee Supplies.



Eyrie Shipping Coop

The Eyrie Shipping Coop is a strong, light Coop made in three parts. The top and bottom are made of wood and the body is composed of corrugated paper in the form of a tube. The bottom is composed of a frame of wood covered with a sheet of heavy veneer having sufficient strength to hold all the weight necessary. The top is composed of a wooden frame with slats running across. This strong

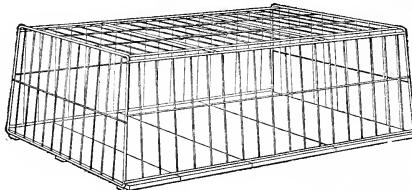
construction enables the Coop to resist hard knocks, making it practical in every way. Ventilation is supplied through the top as the wooden slats are placed from 1 to 2 inches apart. The large holes cut in the ends and used for a grip when picking up the Coop, help to ventilate as well. Corrugated paper, by reason of its smoothness, prevents damage of the bird's plumage and the nature of its construction enables it to keep out drafts.

PRICES (Knocked Down)

No.	Inches	Each	No.	Inches	Each
A	18 x 12 x 18 deep	\$0 65	D	21 x 24 x 22 deep	\$1 10
B	21 x 12 x 22	" 85	E	21 x 33 x 24	" 1 25
C	21 x 18 x 22	" 1 00			

The Pittsburgh Shipping Coop

The most serviceable, sanitary, and durable Shipping Coop on the market. Made of the best galvanized steel bars and wire electrically welded together and sufficiently stayed to make it rigid throughout. The bottom is made of the best seasoned wood and is assembled by the floor-boards being



stapled to three cross sections and reinforced with cleats on top.

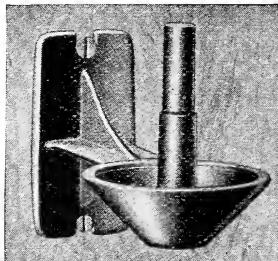
Standard Size. 27 x 41 x 13 inches high. \$3 25
Turkey Size. 27 x 41 x 20 inches high. 4 00

Eureka Oil-Cup Perch-Support

Mites or Lice Cannot Reach Your Hens at Night as they must first swim the oil in cups, which means certain death.

It is practicable, durable, reliable, convenient, cheap and permanent.

PRICES Postpaid
One Pair. \$0 75 \$0 85
Six Pairs. 4 25 4 60



The Lyon Roost Insulator

Its application is best explained as follows: An upright support, perhaps 1 1/2 or 2 inches square and of any desirable height, is used for each end of roosts. Holes are bored in at the top of these supports large enough to allow the Insulator to fit tight and deep enough to allow bottom of Insulator bell to rest on square top of upright.

The roost-pole is then bored to fit tight on top of Insulator and deep enough to allow it to rest on the small shoulder provided for that purpose.

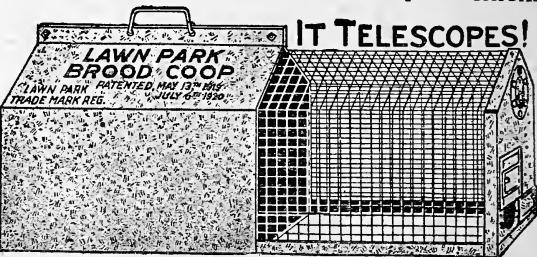
The bell-shaped cup is then kept partially filled with kerosene oil which either traps and destroys the vermin or turns them back in their travels up the supports towards the roost.

Postpaid
One Pair. \$0 20 \$0 30
Six Pairs. 1 00 1 20



The LAWN PARK Brood Coop

SAVES THE CHICKS



Patented May 13, 1919

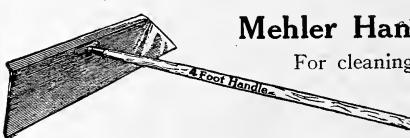
It is made entirely of galvanized materials, will not rust, and absolutely protects chicks against rats, cats, dogs, hawks, vermin, cold, storms, and all other chick enemies. The metal actually repels lice—that's important. The main part of the Coop is made from heavy galvanized steel, while the Park is made from strong galvanized wire screen, which has the edges neatly bound and strongly reinforced with galvanized steel. The Lawn Park is large and roomy, being 18 inches wide, 19 1/2 inches high, and 48 inches long, with Park extended. The Coop and the Park are of equal length. The Park permits the chicks to have plenty of sunshine and fresh air, and also allows them to range on grass. Can be moved from place to place easily, thus giving them a fresh supply daily. Coop has removable bottom for quick and easy cleaning. The overhead damper ventilation system keeps the Coop cool without chilling the chicks. The chicks saved on one brood will pay for one or more Coops. Price \$4.

The BABIE Chick-Feeder (PATENTED)

Made of best grade galvanized materials, it is rust-proof and will last a lifetime. Very strong and durable, the ends being made of solid sheet steel to which is securely fastened the galvanized wire screen which is strongly bound on the edges with galvanized steel. Has patent door arrangement which permits the



little chicks to enter but prevents the mother hen and older fowls from going inside. Will readily accommodate thirty to forty chicks at once. Can be placed anywhere or moved from place to place easily. The feed is dropped through the top and the little chicks can eat and drink in contentment without being crowded or trampled by older fowls. It is so designed that it can be placed in front of the Lawn Park Coop and securely fastened to make an additional runway of 2 feet, or it can be used in connection with any brood coop, as the door of the feeder is so made that it will fit practically any brood coop, thus supplying a yard to the ordinary closed coop. Size 6 inches high, 18 inches wide, and 24 inches long. Saves feed and chicks. Price \$1.50, postpaid \$1.75.



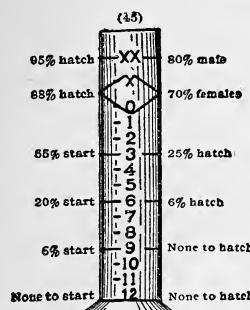
Mehler Handy Scraper

For cleaning poultry-houses and dropping-boards; gets the corners. Time is money; be

progressive; save by using Mehler Scraper. Does the work better in one-third the time, and soon pays for itself. Scrapes on the push or pull. 13 inches wide, 4 inches high. Price \$1.25.

Moe's Scraper and Cleaner

Made of one piece of galvanized iron. No wood handle to get loose and come off. Just the thing to get in the corners when cleaning. 10 inches long. Price 20 cts., postpaid 30 cts.



Magic Egg Tester
PAT. 08

One of the best punches on the market. All steel, nickel plated, punches clean, hole is right size, will not bruise the foot. Price 25 cts., postpaid.



Moe's Ideal Poultry-Punch

An improved Punch, scissors type. Works easily, cuts cleanly, and does not pinch the foot.

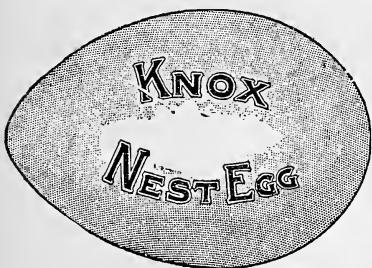
Convenient to carry in vest-pocket and the lower end is an excellent cigar cutter.

Nickel-plated finish. Length 3½ inches. No. 39. Ideal Punch.....Price, each 50 cts.; postpaid 55 cts.

Knox Lice-Expelling Nest-Egg

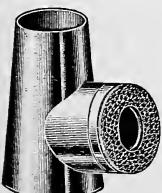
A Scientific Triumph—Lice-Killer and Nest-Egg Combined in One.

Contains a powerful disinfectant which will drive all lice and vermin out of the nests. Simply used by placing in nest under nesting material. They are also used as nest-eggs, but care should be taken not to let them come in contact with the eggs for any length of time, as the hen's eggs will become tainted. For this reason we recommend that they be put under the nesting material. Price: Postpaid, 10 cts. each, 75 cts. per doz. By express, 6 cts. each, 65 cts. per doz.



Glass Nest-Egg

Very popular, and the cleanest nest-egg used. Price 4 cts. each, 35 cts. per doz.; postpaid, 45 cts. per doz.



Moe's Egg-Tester

Used with an ordinary lamp (No. 2 burner) in a dark room.

It will illuminate the interior of the egg, and show if the chick is alive, and also show the size of air-cell in the egg.

No. 48. Moe's Egg-Tester. 30 cts. each; postpaid, 35 cts.

Farmers' Caponizing Set

This set differs somewhat from the Philadelphia Caponizing Set inasmuch as a twisting and a tearing scoop is used instead of the canula for removing the testicles. Price, complete, with instructions in velvet-lined case, \$3 per set, postpaid.

Breeders' Magic Egg-Tester

The cut to the left shows the Tester minus the fine wire clamps which are attached to the bottom for holding the egg, and which, together with the Tester, are dropped in a pail of water. The water-line shows the exact grade. Eggs testing "o" or above are the kind to use for incubation. For example, eggs testing from "o" to "x" hatch to the extent of 88 per cent and 70 per cent of the chicks will be females. See cut.

This Tester requires no skill or expense to operate—just a pair of hands and eyes. Will grade 400 per hour, and the greatest money-saver in the realm of poultry supplies. Fully guaranteed. \$2.50 each, postpaid.

Prairie State Egg-Tester

To use on any ordinary hand lamp. Constructed of tin plate, with heavy carriage cloth. Price 75 cts.; postpaid, 85 cts.

Pettey's Perfect Poultry-Punch



Caponizers

Large profits await the raiser of capons. Pilling's instruments are the acknowledged leaders in this line.



This set has many admirers. It consists of a knife, for making the incision; the spreader, for holding sides open; sharp hook, for piercing skin; the Lansdowne Remover, for removing the testicles. Cords with hooks are for holding the bird. Cup forceps for removing any foreign matter. They are fine instruments of the best workmanship. Prices (postpaid), in velvet-lined case \$2.75; in pasteboard box \$2.50.

Pilling Special Caponizing Set

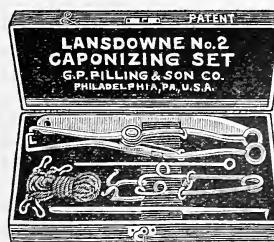
The finest set in the world for the price. It is used just the same as other Caponizing Sets, except that the Testicle Remover cuts, like a pair of scissors, the cord of the testicle clean and clear as a whistle. The instruments in this set are put up in oak case sent postpaid with full, easy-to-use directions on receipt of \$4.



Cornell Caponizing Set

Experiments in the use of various caponizing instruments recently carried on by E. W. Benjamin, Instructor of the Department of Poultry Husbandry at Cornell University, have resulted in the manufacture by us of the Cornell Caponizing Set.

This set—two testicle removers, Pilling-Farmer twisting scoop, and Pilling-Miles remover—sells for the reasonable price of \$5, postpaid.



Lansdowne Caponizing Set

Lansdowne Automatic Testicle Remover is, as its name implies, automatic—quick, easy to use, and just the remover for the beginner.

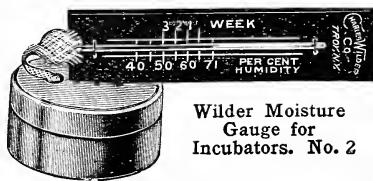
Does not have a lot of unnecessary springs which are liable to get out of order. The grasping loops are exactly same principle as the Miles Remover, which has been in use for fifty years, but our patent feature has made it perfect as to simplicity of the operation and to prevent making slips. Price \$3.50, postpaid.

Incubator and Brooder Extras

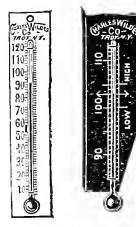
	Each	Postpaid
Prairie State Incubator Regulator, No. 1.....	\$4 00	\$4 15
Prairie State Incubator Regulator, Nos. 2 and 3.....	5 00	5 15
Prairie State Brooder Regulator, Complete. The compound wafer type.....	2 00	2 15
New Wafers for Wafer Regulator. Each.....	75	80
Argand Gas Burner for Prairie State Incubators and all styles of Hovers.....	60	65
No. 1 Lamp. Capacity 1 3/4 pints, takes No. 1 burner, and 1/2-inch wick. Used in both sizes of Keystone Incubators. Price, with burner and chimney.....	1 50	1 60
No. 2 Incubator Lamp. Takes No. 2 burner; uses 1-inch wick; capacity 2 3/4 pints. Used in No. 1 Diffusion Incubator. Price, with burner and chimney.....	2 00	2 10
No. 2 Brooder Lamp. Takes No. 2 burner; capacity 3 pints. Used in all sizes colony house brooders, Universal and Portable Hovers. Price, with burner and chimney.....	2 00	2 10
No. 3 Incubator Lamp. Capacity 4 pints; takes No. 3 burner; uses 1 1/2-inch wick. For Nos. 2 and 3 Incubators. Price, with burner and chimney.....	2 50	2 60
Chimneys.....	60	65
No. 1 Sun Hinge Burner. Uses 1/2-inch wick. Each.....	50	
No. 2 Sun Hinge Burner. Uses 1-inch wick. Each.....	60	
No. 3 Sun Hinge Burner. Uses 1 1/2-in. wick. Each.....	75	
Nos. 1 and 2 Wicks. Dozen.....	30	
No. 3 Wicks. Dozen.....	40	
Wilder Moisture Gauge for Incubators.....	1 75	
Tycos Incubator Hygrometer.....	1 75	

Wilder Accurate Thermometers and Hygrometers

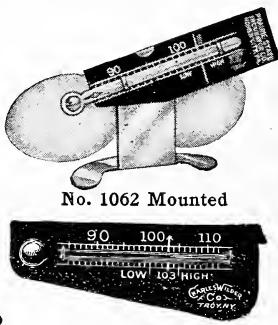
FOR INCUBATORS AND BROODERS. YOU CAN DEPEND UPON THEIR LASTING ACCURACY



Wilder Moisture Gauge for Incubators. No. 2



1110 1062 1046



No. 1062 Mounted

1052



No. 1116

Description and prices of above numbers are as follows:

	Each	Postpaid
No. 1046. Buckeye Incubator Thermometer.....	\$0 75	\$0 80
No. 1052. Cypher's Incubator Thermometer.....	75	80
No. 1062. Prairie State Incubator Thermometer, mounted.....	1 00	1 10
No. 1110. 5-inch Brooder Thermometer (fits any Brooder).....	40	45
No. 1116. Brooder Thermometer.....	75	80
No. 2. Wilder Moisture Gauge for Incubator.....	1 75	

BEES AND POULTRY

A good combination, for during the season when poultry requires attention bees do not. See pages 146 and 147

Poultry Judges' Sticks

	Telescopic	Each	Postpaid
Small.....	\$0 90	\$1 00	
Medium.....	1 25	1 35	
Large.....	1 75	1 85	

- A Shows Large Stick closed.
- B Shows Large Stick opened.
- C Shows Medium Stick opened.
- D Shows Small Stick opened.

Perfecto Spiral Leg-Bands

KNOW YOUR HENS ON SIGHT

In ten colors—Red, Green, Amber, Black, White, Pink, Yellow, Ruby, Light Blue, and Dark Blue.

For large and small birds, chicks, and pigeons. Mark each bird for its pen. Give each pen a different color. Mark old birds and pullets differently and know what you are doing.

Perfecto Bands have extra-long lap, making them strong and securing them from coming off.

SIZES		
No. 1. Asiatic Breeds.	No. 4. Bantams.	
No. 2. American Breeds.	No. 5. Pigeons.	
No. 3. Leghorns, etc.	No. 6. Baby Chicks.	
Nos. 1, 2, 3, and 4 Postpaid	Nos. 5 and 6 Postpaid	
12 bands.....	\$0 20	\$0 15
25 bands.....	40	25
50 bands.....	70	40
100 bands.....	1 00	100 bands.....
500 bands.....	4 00	500 bands.....

In Ordering Be Sure to Specify Your Breed

Leader Adjustable Leg-Bands

Latest and best adjustable Leg-Band out. Has neatest, most compact, and smoothest fastening of any adjustable Band on the market. Easily attached, absolutely secure, and has no catching points.

Are made from heavy aluminum, are strong and substantial and will hold their shape.

Made in two sizes: No. 1 for Bantams or Mediterraneans; No. 2 for Americans to Asiatics and Turkeys. We number them to order. Not made in pigeon sizes.

PRICES (Postpaid)

12 Bands.....	\$0 25	50 Bands.....	\$0 50	250 Bands.....	\$2 00
25 Bands.....	30	100 Bands.....	85	500 Bands.....	3 75
Initials on Bands 5 cts. for 50 or less, 10 cts. per 100 extra					

PRICES (Postpaid)

12 Bands.....	\$0 35	50 Bands.....	\$1 00	250 Bands.....	\$3 50
25 Bands.....	60	100 Bands.....	1 60	500 Bands.....	6 75

PRICES (Postpaid)

12 Bands.....	\$0 25	50 Bands.....	\$0 55	250 Bands.....	\$2 10
25 Bands.....	35	100 Bands.....	90	500 Bands.....	3 90

Double Clinch Pigeon Bands



DOUBLE CLINCH LEG BANDS PIGEON SIZES

PRICES (Postpaid)

12 Bands.....	\$0 25	50 Bands.....	\$0 55	250 Bands.....	\$2 10
25 Bands.....	35	100 Bands.....	90	500 Bands.....	3 90

The Only Chicken-Holder

A labor- and time-saving device when getting chickens ready for the showroom.

One person can do the work where it requires two, and in less time, if you own a Chicken-Holder.

Makes washing fowls a pleasure and saves the feathers from getting broken or pulled out as is very often the case with many a good bird when it tries to get away.

It Is Indispensable When—

Washing any size fowl all over.

Holding birds when taking out off-colored feathers.

Washing the head and legs.

Holding birds to band them.

Trimming off corns.

Holding a sick fowl to give it medicine.

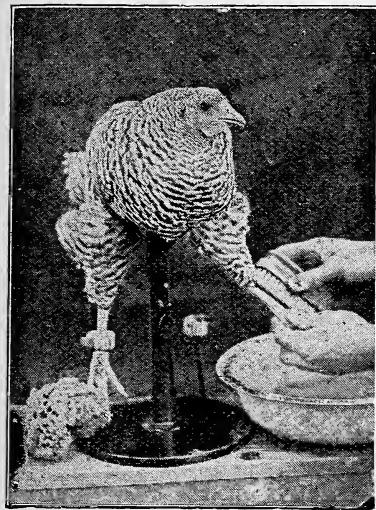
Operating on most any part of a fowl.

Holding game birds in getting them ready for the pit.

Trimming the comb of game birds.

Holding a bird to clean out sour craw, or fix up craw-bound case. In fact, for any purpose which requires the holding of a fowl.

Price \$3.50; postpaid, \$3.75

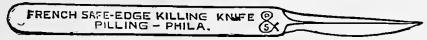


French Poultry-Killing Knife



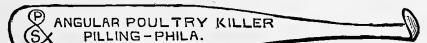
Price 50 cts., postpaid

Safe-Edge Killing Knife



Exactly same as French Killer except cut on one side only. Price 50 cts., postpaid.

Pilling Angular Poultry-Killer

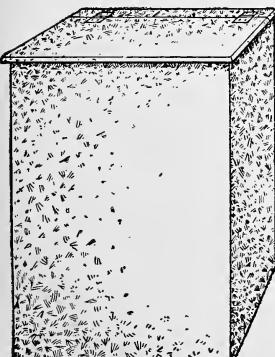


Price 50 cts., postpaid

Philadelphia Gape-Worm Extractor



Price 25 cts., postpaid



Galvanized Iron Feed-Bins

These Bins have been made to meet a demand for economical and space-saving feed-containers. They are made to hold about three bushels, and are proof against rats and mice. Strongly constructed with hinged lid. 10 inches wide, 21 1/2 inches long and 20 inches high. Price \$5.

If your hens are not laying try Semi-Solid Buttermilk.

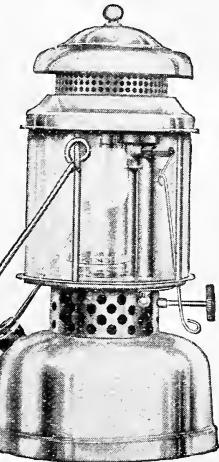
Storm King Lantern

400 CANDLE-POWER

Get more eggs by hanging a Storm King Lantern in your poultry-house. Poultrymen everywhere are increasing egg-production by using them in hen-houses a few hours each night and morning—longer feeding hours increase the egg-yield.

The Storm King makes and burns its own gas from common motor gasoline, giving more light than twenty oil lanterns and costing a little over a cent for three hours' use. Absolutely safe. Burns in any position and in any wind. No danger, even if tipped over. Tested by egg-producing authorities and has their unqualified approval.

Capacity of fount, 1 quart—burns 12 to 15 hours on one filling. Height 13 inches, weight 4 pounds. Equipped with Mica Chimney, 1 No. 1A Rag Mantle, and all accessories. Shipping weight, 5 pounds. Price \$8.



The Comfort Heater

FOR HOUSE OR CAMP

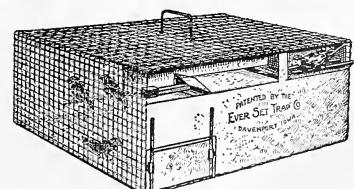
In city, town and country this combination heater-cooker—this miniature little furnace—has been equally welcome as an indispensable household necessity. It drives out chill and dampness in the bathroom, dining-room or den; in the fruit and vegetable cellar it keeps out freezing temperature; in poultry houses it is invaluable in extremely cold weather; and without adjustment it can be used by camper, traveler, or hunter to cook the hurried meal. Burns 8 hours on one quart of gasoline. Saves time, work, worry, and expense. Height, 12 inches; weight, 4 pounds. Blued steel heat-drum; highly polished nickel fount. Complete shipping weight, 5 lbs. Price, \$7.50.

Ever-Set Sparrow Trap

Made of 5/8-inch galvanized hardware cloth. They have been fully tried out and have caught as high as 65 sparrows in one day in summer, and 40 in one day in winter in a single trap.

Size of trap 18 x 18 x 12 inches, with 3 x 5 x 18-inch receiving-cage (for drowning), with complete instructions.

To the Farmer and Poultryman. Fifty sparrows eat daily the equivalent of a quart of wheat. Very likely you have many more than 50 sparrows fattening on the high-priced feed that you intended for your poultry. An Ever-Set Sparrow Trap, in the month of June, 1919, caught 562 English sparrows in a back yard in the city of Davenport, —1,529 in five months (June to October). How much feed would these 1,529 have stolen from your poultry-yard each day? Without stopping to figure it is clear that an Ever-Set Trap pays for itself in a very short time. Price \$5, postpaid \$5.60.



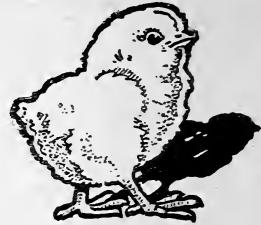


Conkey's

THE ORIGINAL

BUTTERMILK STARTING FEED

Feed It for Eight Weeks and Raise Every Chick You Hatch



What It Contains

Buttermilk, hulled oats, wheat middlings, cornmeal, cornfeed meal, and bone.

Makes Chicks Husky

Conkey's is a ready-prepared feed containing all elements for perfect growth of young fowls. It puts vim and vigor into your baby chicks at a time when they need it most. It makes them strong and husky, so they can fight off the chick diseases which kill hatches so rapidly.

Conkey's gives your chicks buttermilk in a concentrated, sanitary form, not too much and not too little. Feed it dry. The lactic acid is just what is needed as an aid in the prevention of digestive and bowel troubles. With the buttermilk is a combination of clean, wholesome grains, balanced in just the right proportion to help the little fellows over the critical first EIGHT weeks and give them a good start toward healthy maturity.

Guaranteed Analysis

Crude protein, 12 per cent; crude fiber, 4 per cent; crude fat, 3 per cent; nitrogen-free extract, 56 per cent; carbohydrates 60 per cent.

This starting mixture is high in nutrients and low in fiber, so the sensitive organs of the chicks are not overtaxed by digesting waste material of no food value. Avoid feeds high in fiber—they're dangerous.

How to Feed First Eight Weeks

Chicks should have pure drinking-water, with chill removed, and fine grit from the start, but no feed for 48 hours. Then give Conkey's Buttermilk Starting Feed. That's all the feed they'll need for the first EIGHT weeks; add greens the second week. During the fourth week, scatter Conkey's Chick Grains in the litter to induce exercise. After the eighth week begin gradually changing to Conkey's Growing Mash.

Conkey's Buttermilk Growing Mash

A Bone and Muscle Builder—Produces Layers and Broilers

Guaranteed Analysis

Crude protein, 18 per cent; crude fiber, 5 per cent; crude fat, 4 per cent; nitrogen-free extract, 50 per cent; carbohydrates, 55 per cent.



This mash takes the little fellows after they have had a good start and supplies the necessary materials for a strong frame and solid flesh. It contains no charcoal, grit, nor shell. You get what you pay for—all pure, clean food. Remember, you can't make something from nothing—bone- and muscle-building require the proper feed and plenty of it. In addition scatter in the litter Conkey's Growing Grains.

Conkey's Buttermilk Laying Mash

Get Winter Eggs in Abundance with this Perfectly Balanced Ration

Guaranteed Analysis

Crude protein, 18 per cent; crude fiber, 6 per cent; crude fat, 4 per cent; nitrogen-free extract, 44 per cent; carbohydrates, 50 per cent

This feed is wholesome grain, buttermilk, meat, and bone in precisely the right proportion to keep your flock in prime condition and at the same time make readily available each component part of the egg. Remember, properly balanced feeding is the secret of large egg-production. If your hen hasn't exactly the ingredients required she simply won't lay. You can't beat this—it's a law of nature. Conkey's Buttermilk Laying Mash is the result of years of study and tests. The hens relish it and lay accordingly. With this mash give Conkey's Scratch Grains in deep litter, using about one-half as much Scratch Grain as mash.



Conkey's Poultry Scratch Grains

MILLED IN GRADED SIZES TO FIT SPECIAL FEEDING PERIODS

Conkey's Chick Grains

A specially prepared cracked grain feed to be fed to little chicks at the end of the third or fourth week in connection with Conkey's Buttermilk Starting Feed. Scatter in the litter so as to induce exercise and prevent toe-picking.

Conkey's Growing Grains

Made from cracked grains larger in size than chick grains and balanced more for growing stock. This should always be scattered in the litter for the growing birds so as to keep them good and busy, and is fed in connection with Conkey's Buttermilk Growing Mash.

Conkey's Scratch Grains

This is for all grown birds, containing the larger grains properly proportioned and scattered in the deep litter for general exercise. It is fed in connection with Buttermilk Laying Mash and rounds out a hen's daily ration.

Don't Break the Conkey Chain of Feeds.

For Prices on Above Feeds See Our Monthly Poultry Feed Price-List Accompanying this Catalogue

Pratt's Buttermilk Baby Chick Food



The cost per chick for three weeks is about one cent. If, by using Pratt's Buttermilk Baby Chick Food, you can save five more chicks out of one hundred than you formerly did, considering these five chicks at three weeks of age as worth at least one dollar, your food has cost you nothing and you have five more husky chicks.

These figures are too conservative, as losses ordinarily in many cases

average from 25 to 50 per cent for the first three weeks.

The use of Pratt's Buttermilk Baby Chick Food reduces these losses to a minimum.

Pure millet, high-grade rape, cooked wheat, sterile bone and shell meal, to hasten bone development and avoid leg weakness; clean, nourishing middlings; cornmeal, plump hulled oats, and dried buttermilk, all these insure steady and healthy growth. High heat is applied to sterilize it.

It Analyzes as Follows:

	Per cent	Per cent
Protein.....	11.50	Carbohydrates..... 69.00
Fat.....	3.50	Nitrogen-free Extract... 62.20
Fiber.....	3.50	

A careful analysis of the articles used in Pratt's Buttermilk Baby Chick Food will demonstrate its exceptional value as a food for baby chicks.

F. P. C. Chick Manna

It is the pioneer in Special Prepared Chick Food, being brought on the market in 1884 when specially prepared chick feeds were unknown. Many imitations and substitutes have come on the market since with great claims, but none have had the thirty-four years of successful results as F. P. C. Chick Manna.



pared for bringing the tender little creatures through the most critical period of their life by regulating and strengthening their fine and tender organs, and aiding in the prevention of these fatal attacks of dreaded bowel trouble and other chick ailments.

Every package guaranteed to give satisfaction or money back. For Prices see our Monthly Poultry Feed Price-List.

Miscellaneous Seeds and Grains

Cracked Corn	Hemp Seed	Barley
Whole Corn	Canary Seed	Wheat
Pigeon Corn	Rape Seed	Buckwheat
Cracked Wheat	Kaffir Corn	Millet
Pinhead Oatmeal	Pigeon Peas	Vetches
Hulled Oats	Broken Rice	Oil-Meal
Sunflower Seed	Flaxseed Meal	Gluten Meal

Our stocks of the above are carefully selected and will be found equal to any on the market.

For Prices on above Feeds See Our Monthly Poultry Feed Price-List Accompanying This Catalogue

Chamberlain's Perfect Chick Feed

THE ORIGINAL DRY BABY CHICK FEED



Contains no corn.

Prevents bowel trouble and many other diseases caused by improper feed.

All food—not a pound of waste in a carload.

Costs more per pound but less per chick—and it is the chick that counts.

Put up by a formula as carefully as a druggist compounds a prescription.

Contains all the meat, bone, charcoal, grit, oatmeal, etc., necessary for the successful raising of baby chicks, thus making it unnecessary to feed them anything else. Containing everything that is necessary in just the proper proportion, it makes it possible for the inexperienced poultry raiser to raise chickens as successfully as those who have given special attention and years of study to the problem.

Chamberlain's Perfect Chick Feed has no competition as there is no other feed manufactured like it. It is not put up for looks but for results.

Spratt's Chick Meal Nos. 3, 5, and 12

(A Cooked Food)

No. 3 Coarse; No. 5 Medium; No. 12 Fine

Is prepared strictly according to modern scientific methods and is the result of careful and exhaustive experiments.

It has been demonstrated and is admitted by all experts that to rear birds successfully and bring them to the highest state of perfection they must have, while very young, a cooked food, and their corn diet must be carefully limited. This food should be composed of cereals, meat, vegetable, bone, and shell in judicious combination. Such is Spratt's Patent Chick Meal.

The price of our food seems high, but a trial will prove that it is the cheapest and most economical that can be used.

No. 3 is used as a conditioner for the show-room and has no equal for that purpose.



Semi-Solid Buttermilk

For Young Chicks, Laying Hens, and Fattening Milk-Fed Poultry

Pure Rich Buttermilk with 75 Per Cent of the Water Removed



HENS THAT LAY ARE THE HENS THAT PAY

Poultry experts everywhere have long recognized the value of buttermilk as a feed, a tonic, and a regulator for poultry. In the past many poultry-raisers have found it very difficult to get enough buttermilk at low prices to permit feeding it on a large scale. Today **Semi-Solid Buttermilk** makes it possible for poultry-raisers to feed the purest and richest buttermilk in any quantity they see fit.

For feeding purposes, you need only mix one pound of **Semi-Solid Buttermilk** with one gallon of water.

Semi-Solid Buttermilk is not only a highly nutritive poultry feed, it is, likewise, the best tonic and conditioner. The lactic acid in buttermilk is one of the greatest foes of disease germs of all kinds. **Semi-Solid Buttermilk** is a wonderful aid to the digestion and eliminates worms and germs, thereby allowing your chickens to derive full nutriment from every ounce of feed. Little chicks need predigested nourishment. Feed them **Semi-Solid Buttermilk**. It makes them mature much quicker, prevents white diarrhea, and reduces death losses to the minimum. It will keep your hens laying all winter and keep them healthy, vigorous, and contented. **Semi-Solid Buttermilk** has remarkable effect in stimulating the organs of egg-production.

Ogemaw AA Pigeon Feed

Ogemaw AA is a mixed feed, composed exclusively of sound, clean, wholesome grains and seeds. It contains no dirt, dust, shell, or grit. Excepting only the cracked corn, the entire mixture is whole seed, making it possible for anyone to identify every component of the mixture. Pigeons require no other feed when fed on Ogemaw AA, though it may be an advantage to give an occasional feed of clear peas to breeders and young stock.

Peas are the favorite food of all Pigeons, being rich in protein and the cheapest source of protein supply in America, taking the place of lentils, vetches, etc., the prices of which are so high as to render their use impracticable.

Ariston Pigeon Feed

A high-grade Pigeon Feed composed of peas, buckwheat, kafir corn, millet, wheat, round flint corn, broken rice, lentils, hemp seed and canary seed.

Experienced pigeon raisers tell us the Ariston formula is hard to improve on.

Alfalfa Meal—Coarse

Our Coarse Alfalfa Meal is preferred by some poultrymen to the fine ground sort. When wet freely it has the appearance and flavor of fresh cut grass and is eagerly eaten, stems and all, by the poultry.

Alfalfa Meal—Fine

Many feeders prefer Alfalfa Meal to Cut Red Clover on account of its high protein value and its powerful digestive properties. Our Alfalfa Meal is made from choice Alfalfa ground very fine, and is worth a great deal more than the ordinary grades.

Cut Red Clover

Cut Red Clover is one of the best green foods for winter egg-production. The grade we offer is the purest and best to be had.

Blatchford's Rabbit Meal

A milk substitute feed for weaning young rabbits. Aids both growth and maturity. Excellent for nursing does and for fattening rabbits for market.

Darling's High Protein Meat Scraps

Made from clean, fresh trimmings from butcher shops, thoroughly cooked. After the cooking, every possible bit of water and grease is extracted in tremendous presses, and the solid cakes of meat are evenly broken up by special machinery. It contains more digestible protein, and less fat, moisture and waste, than any other brand of meat scraps or so-called beef scraps.

ANALYSIS

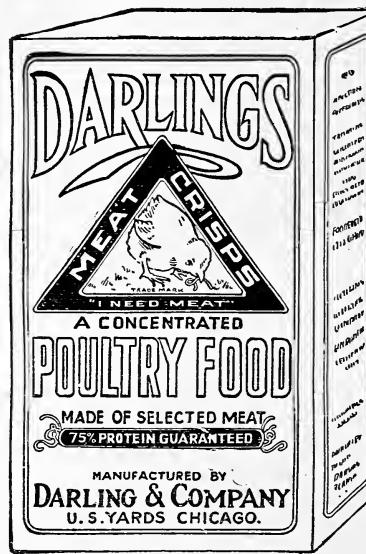
Protein 50 per cent
Fat (minimum) $\frac{1}{2}$ of 1 per cent
Fiber (maximum) 3 per cent

Furnished in two grades, regular and fine.



Darling's Meat Crisps

A NEW MEAT RATION



Darling's Meat Crisps are manufactured from high-grade fresh meat-trimmings, carefully cooked, pressed, dried, and uniformly ground. The guaranteed analysis is: Protein, 75 per cent; fat, $\frac{1}{2}$ of 1 per cent; fiber, 3 per cent maximum. This gives you a protein content one and a half times that of common meat scraps; therefore, two pounds of this meat food equals three pounds of the ordinary meat scraps.

They are absolutely sanitary, and provide in concentrated form the elements that assure the highest fertility in the eggs and the most vigorous chicks. They supply the growing chick from the beginning with the elements of growth that it otherwise must go far and work hard to find.

They shorten the moulting period, mature pullets early, and keep the whole flock healthy.

Three Grades—Coarse, Medium and Fine

Greene's Fish Scraps

There is an ever-increasing demand for Fish Scraps for poultry feeding, as they have been proved a great egg-producer, and poultry are very fond of them. They are used extensively as the animal matter in the leading dry mashes on the market today. Poultry seem to eat a mash with Fish Scrap more readily than one containing beef scrap. They are made from fish meat and bone and run from 40 to 60 per cent protein and 3 to 5 per cent fat.

Darling's Blood Meal

Darling's Blood Meal runs very high in protein (80 to 90 per cent) and contains very little moisture and fat. It is manufactured expressly for feeding purposes and is guaranteed to be absolutely pure.

Granulated Poultry Bone

Made from fresh, clean green bone, from which the fat and moisture have been extracted. The pure bone is then dried and granulated before being sacked for shipment. Keep it before your hens all the time.

Poultry Bone Meal

This is exactly the same product as the granulated bone, but it is ground up fine for convenience in feeding in a mash. It is especially valuable during growing and moulting periods and should be used to supplement meat scraps at these times.



Belle Brand Crushed Oyster Shells Make Poultry Pay!

Crushed Oyster Shells have long been recognized as a most important article for poultry yards. They should be kept where the fowls can have easy access to them all the year round, as experience has demonstrated that fowls need them in summer as well as winter. They supply carbonate of lime in natural form, act as a grit, and produce a firm, hard shell. Belle Brand shells are dry, and, having been carefully screened, are free from dust and dirt.

We carry two sizes in stock, Coarse and Fine, the prices of which are the same.

Poultry Charcoal

Keeps poultry strong, healthy, and in good laying condition. Aids digestion, corrects wrong feeding and prevents disease. Fowls young and old should have free access to it at all times. We carry two sizes in stock—Medium and Fine.

Red Cross Health Grit

Since 1903



For Pigeons, Fowls, and Cage-Birds

Positively the Best. A manufactured mixture containing a great variety of gritty particles and materials with tonic properties, including charcoal, sulphur, lime, salt, shells, etc., in proper proportions.

You save all other trouble and expense when using Red Cross, as only water and good feed in addition are required to keep birds in perfect health.

They Eat It Like a New-Found Luxury. All birds relish it. Contains in condensed form the best tissue-building ingredients for birds known to science, and the greatest variety of gritty matter. A reconstructive tonic mixture of only pure properties. Never use chicken grit for pigeons.

Good grain alone will not make hens lay, squabs plump, or birds sing; they have no teeth and must have grit to grind their food and it should be a palatable grit mixture they relish.

RED CROSS HEALTH GRIT

Makes Plump Squabs	Makes Prolific Breeders	No More Roup
Whiter Meat	Prevents Disease	Because It Makes
Squabs Mature Sooner	No More Diarrhea	Rich, Red Blood

It is used at all leading shows, including the National, at the largest squab and poultry plants, and by the U. S. Government.

Its iron properties make it ideal for Flying Homers.

When you order feed, order Red Cross Health Grit.

For prices on above feeds, see our monthly poultry feed price-list accompanying this Catalogue

Broschkowsky's Health Grit

For pigeons. It has a friend in every fancier who has ever tried it.

Every ingredient entering into the composition of Broschkowsky's Health Grit is the best obtainable, clean and is prepared amid sanitary surroundings. One trial will convince you of its superior quality. It contains nothing injurious of any nature; keeps your birds' digestive organs in prime order; provides the proper shell material; assists the birds in the moult; raises more and stronger youngsters; and wards off many troublesome diseases.

Hen-E-Ta

Lack of Vitality in Birds Causes 95 per cent of Poultry Failures. More Phosphorus and Less Protein is the Remedy

WHAT HEN-E-TA IS

Hen-e-ta Bone Grits is a grit-food rich in phosphorus. It takes the place of bone, oyster shells, beef scraps, and grit. It enables you to cut down your grain ration at least 15 per cent, as the phosphorus aids assimilation to such a degree that whatever grain protein is fed will be more extensively taken up by the fowl's system.

Hen-e-ta is a porous grit-food which can never wear smooth. It is, however, soluble in the gastric juices of the gizzard, and is entirely used up by the digestive organs. It is not passed out as is other grit when it has become worn.

Ordinary hen manure contains about 11 per cent protein. By cutting a part of the grain ration, and adding Hen-e-ta to your bird's diet you will cause this protein to be more fully digested and assimilated and will make it stay in the body and in the eggs of the fowl, where you can turn it into money.

Feed less protein—less grain, green bone and beef scrap—and you will have poorer manure, but much better fowls, more eggs, and a greater profit.

In these days of food-conservation and high feeding costs, Hen-e-ta becomes more than ever a money-saver.

The No. 1 Fine, is for little chicks.

The No. 2 Medium, is for the mature fowl.

The No. 4 Superfine, is for use in the mash.

ENOUGH TO MAKE ANY CHICKEN LAUGH!!!

Mica Crystal Grit

Analysis proves that Mica Crystal Grit is the only rock known that shows the combination of mica, quartz, aluminum, iron, and magnesium, essential to all poultry. Winter seems to be the natural season for its use, but it is now used both summer and winter. Poultry should have free access to it at all stages of their growth.

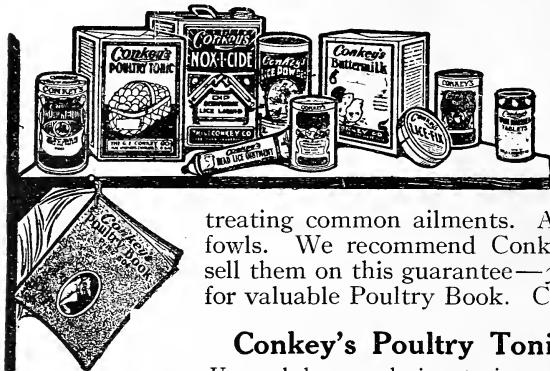
We carry in stock three sizes designated as "Poultry," "Pigeon," and "Chick," all at the same price.



OUR POULTRY FEEDS

Our line of poultry feeds includes everything necessary to the successful rearing of poultry—feed for the little chick, the growing fowl and the laying hen.

We aim to handle only "the best" and to give our customers "value received for every dollar expended." Back of these feeds is our own reputation and that of the responsible concerns who manufacture or assemble them.



Have a Conkey Corner In Your Poultry-House. It'll Save Many Birds

Only vigorous, healthy birds can produce profits. Keep disease out of your flock by having on hand remedies for "Conkey Corner" is fine insurance against loss of valuable y's Remedies because they are absolutely dependable. We *our money back if you are not satisfied.* Send 5 cents in stamps eck off remedies you'll need, and order at once.

Conkey's Poultry Tonic

Unequaled as a laying tonic, moulting powder, chick conditioner, and poultry regulator. Not a stimulant, not a bit of filler, and no red pepper. It puts an edge to appetites, aids digestion, and helps your birds get more out of their feed. 1½ lbs. 25 cts., postpaid, 30 cts.; 3¼ lbs. 50 cts., postpaid, 60 cts.; 12 lbs. \$1.60, postpaid. \$1.85; 25 lbs. \$3

Conkey's Roup Remedy. Is recognized all over the world as the remedy for this deadly, dangerous disease. Always have it 25 cts., 50 cts., and \$1; postage 20 cts., 55 cts., and \$1.10.

Conkey's Roup Pills. For individual treatment. 30 cts., 60 cts., and \$1.20; postpaid, 35 cts., 65 cts., and \$1.25.

Conkey's White Diarrhea Remedy. A splendid preventive and remedy for fatal, and contagious scourge of little children. Price, 25 cts., and 50 cts.; postpaid, 30 cts., and 55 cts.

Conkey's Limberneck Remedy. Relieves ptomaine poisoning, called "Limberneck." 50 cts.; postpaid, 55 cts.

Conkey's Gape Remedy. Relieves chicks of the choking gape-worm. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Canker Special. For canker and bronchitis; relieves and soothes. 50 cts.; postpaid, 55 cts.

Conkey's Cholera Remedy. Stops digestive disorders and so-called cholera. 25 cts. and 50 cts.; postpaid. 30 cts. and 55 cts.

postpaid, Jr. 30. MM 35 MM.

Dr. Hess' Poultry Panacea



Whiting's Rounpene

Whiting's Roupene is a real remedy for roup, canker, and diphtheritic roup. You do not have to quarantine the rousy fowls. 50 cts. and \$1 per bottle, postpaid.

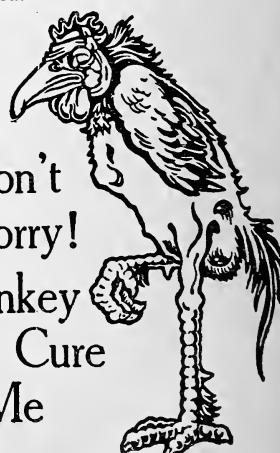
	Each	Postpaid
1½-lb. pkg.	\$0 25	\$0 30
5-lb. pkg.	75	85
12-lb. pkg.	1 50	1 70
25-lb. pail.	3 00	3 35
100-lb. drum.	10 00	

Whiting's
White Diarrhea
Remedy

It destroys the disease germ, cures the chicks, and prevents at once the spread of the disease. 50 cts. and \$1 per bottle, postpaid.

Whiting's site Diarrhea Remedy

Don't
Worry!
Conkey
Will Cure
Me



Pratts

Poultry Regulator • Poultry Remedies Buttermilk Baby Chick Food

HEALTHY BIRDS AND LOTS OF EGGS, THE TWO BIG THINGS IN POULTRY-RAISING, USUALLY FOLLOW THE USE OF



Pratt's Poultry Regulator

Pkgs. 25 cts., 50 cts., \$1.10; 12-lb. pails, \$1.65; 25-lb. pails, \$3;
100-lb. drums, \$10

It builds up vitality, promotes sound digestion, sharpens appetite, thus helping to put birds into condition for heavy egg-laying or winning blue ribbons.

Given to breeding stock it increases the fertility of eggs, strong in vitality, that will hatch chicks that will grow. Use it if you want big hatches of healthy chicks that will develop into husky pullets and cockerels.

Pratt's is the original Poultry Regulator of America and is in use by the most successful poultry raisers everywhere.

It will help prevent many of the common poultry ailments.



Roup is the alert foe of poultry. Its ravages can be prevented and protection given your flocks by using

Pratt's Roup Tablets or Powder

Its healing properties are quickly taken into the system. For genuine Roup as well as colds and similar diseases. 25c. and 50c.; ppd., 30c. and 55c.

Pratt's Powdered Lice-Killer

sprinkled on hens, in nests, dust-baths, etc., will quickly clean up the poultry house. Non-irritating; non-explosive. In sifting top boxes.

An unequaled powder for killing lice on horses, cattle, hogs, dogs, and cats; moths, insects and bugs in houses, stables, and barns. Safe and effective for killing plant-eating insects. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

When hens are not laying, look for lice. These pests cost poultrymen many dollars.



Keep disease away from poultry. Kill lice and mites. Disinfect the poultry house with

Pratt's Poultry Disinfectant

A quick, effective germicide, insecticide, and deodorant. As a spray around stables, cow- and hog-lots, and for use on dogs, cats and pets generally, it is unsurpassed for effectiveness. It is non-irritating and its pleasing, clean odor makes it admirable for household use. Qt. 55 cts., 2 qts. 95 cts., gal. \$1.60, 10-gal. can \$14.

Start them on it their first feed and keep them on it regularly as they grow—you'll see your baby chicks thrive as never before, on

Pratt's Buttermilk Baby Chick Food

A scientific food that gives youngsters the strongest kind of start. It's Life Insurance for Baby Chicks. In small packages; also in 14-, 25-, 50-, and 100-lb. bags.



Other Remedies

Special Compound. For ailments often mistaken for cholera. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

White Diarrhea Tablets. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Sorehead-Chicken-Pox Preparation. 35 cts. and 70 cts.; postpaid, 40 cts. and 75 cts.

Bronchitis Tablets. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Roup Tablets or Powder. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Condition Tablets. 25 and 50c.; postpaid, 30c. and 55c.

Head Lice Ointment. 35 cts.; postpaid, 40 cts.

Scaly Leg Ointment. 35 cts. and 70 cts.; postpaid, 40 cts. and 75 cts.

Red Mite Special. 55 cts. and 90 cts.; postpaid, 65 cts. and \$1. Gape Compound. 30 cts. and 60 cts.; postpaid, 35 cts. and 70 cts.

Lee's Egg-Maker

	Postpaid		Postpaid	
2-lb. pkg.....	\$0 40	\$0 50	25-lb. pail....	\$3 75
5-lb. pkg.....	90	1 00	100-lb. drum....	\$4 00
12-lb. pail.....	2 25	2 45		

Lee's Germozone

Tablets, per pkg., 25 cts., 65 cts., and \$1.25; postpaid, 30 cts., 75 cts., and \$1.40

Lee's Egg-O-Hatch

For applying to eggs during incubation to strengthen the growing chicks, to weaken the egg-shell, and to better the hatch. 50 cts.; postpaid, 55 cts.

Lice Exterminators

	Postpaid	
1 quart.....	\$0 60	\$0 70
2 quarts.....	90	1 05
1 gallon.....	1 50	

LAMBERT'S DEATH TO LICE POWDER

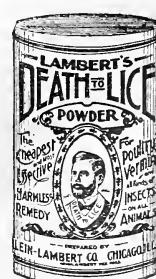
15-oz. pkg.....	\$0 25	\$0 30
48-oz. pkg.....	50	60
100-oz. pkg.....	1 00	1 20

LEE'S LOUSE POWDER

1 1/4-lb. pkg.....	\$0 25	\$0 30
2 1/2-lb. pkg.....	50	60

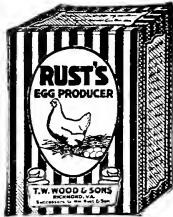
HESS'S LOUSE KILLING POWDER

1-lb. pkg.....	\$0 25	\$0 30
2 1/2-lb. pkg.....	50	60



Rust's Poultry Preparations

Rust's Poultry Preparations have been used extensively by poultry raisers for the past thirty years, and are considered by many as the best on the market. We sell them because we know they are absolutely reliable and we can recommend them to our poultry friends.



Rust's Egg-Producer

You can feed for eggs just as you can feed for milk, beef, or fat pork. You can get plenty of eggs at all seasons by feeding Rust's Egg Producer. This preparation supplies just what the hens need for producing eggs, plumage, growth and development, and in the exact proportions required. It is not a stimulant and does not exhaust the fowls; but being composed of the elements which a fowl's nature requires, it keeps the poultry in first-class condition. Feed every morning; at first, at the rate of one tablespoonful to a quart of meat or wheat bran to each 12 or 15 fowls. Mix it thoroughly and add sufficient water to make it of a crumbly consistency for feeding. Do not wet it enough to make it sticky. After the hens commence laying freely, give the same quantity in the same manner once a week to keep them in good laying condition.

PRICES

	Postpaid	By express
1-lb. pkg.	\$0 30	\$0 25
2½-lb. pkg.	60	50
6-lb. pkg.	1 20	1 00
10-lb. pkg.	1 75	1 50
25-lb. pkg.	3 85	3 25

Rust's Roup Pills

These pills are intended for individual treatment of fowls and pigeons. They act directly on the glands and mucous membranes, allay feverish symptoms, and are believed to be one of the best remedies known for roup, catarrh, colds, and distemper in fowls, and many pigeon diseases.

PRICES

	Postpaid	By express
50 pills in box	\$0 30	\$0 25
112 pills in box	60	50
250 pills in box	1 10	1 00

Rust's Mite Liquid

For exterminating mites—the fowls' greatest enemy. This preparation is put up especially as a preventive of mites that infest the poultry-houses. There is a vast difference in the habits of lice and mites. The mites live on the roosts and in the cracks and crevices of the poultry-houses, whereas lice live on the body of the fowls. Mites come out at night after the fowls have gone to roost, cover their bodies and suck their blood, returning in the daytime to their hiding-places. By spraying or painting Rust's Mite Liquid on the roosts and in all the cracks and crevices once or twice a week, you can rid your poultry-house of mites.

PRICES (Not prepaid)

1-qt. can	\$0 50	1-gal. can	\$1 40
2-qt. can	85	5-gal. can	6 00

Rust's Water Glass

Put up especially for preserving eggs. Eggs put away in this solution will keep fresh from six to ten months. Take advantage of the low price of eggs during the summer months and put them away for use next winter when they are always scarce and high. One gallon of Rust's Water Glass will make enough solution for about 50 dozen eggs.

PRICES (By express only)

1-qt. can	\$0 40	1-gal. can	\$1 25
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Rust's Roup Powder

For roup, catarrh, colds, etc., in fowls and pigeons. Roup is probably one of the most contagious diseases among poultry, and every poultryman should take precautions to safeguard his fowls against this deadly disease. The symptoms are: First, frothiness and watery discharge from the eyes and nostrils; then sneezing, snuffles, and in breathing may wheeze. As soon as noticed the fowls infected should be separated from the rest of the flock and the premises thoroughly disinfected by spraying with Rust's Lice Liquid and Disinfectant. One ounce of prevention is equal to a pound of cure. Rust's Roup Powder, kept regularly in the drinking-water of the fowls during the fall and winter months, will keep your flocks free from these dreaded diseases.

PRICES

	Postpaid	By express
3-oz. box	\$0 30	\$0 25
8-oz. box	60	50
18-oz. box	1 10	1 00



Rust's Climax Condition Powder

For Cholera, Gapes, Diarrhea and Other Poultry Diseases. The regular use of Rust's Climax Condition Powder in the feed three or four times a week (beginning soon after the chickens are hatched) will nearly always keep the fowls free from disease and quickly develop their plumage and vigor. Experience shows that Rust's Climax Condition Powder is equally good for horses, stock, cattle, and hogs. This powder acts on the blood, liver, kidneys, and urinary organs, promotes the digestion, increases the appetite and improves the secretion, thereby causing a healthful condition of the animal. Rust's Climax Condition Powder contains no antimony, arsenic, or anything harmful.

PRICES

	Postpaid	By express
13-oz. pkg.	\$0 30	\$0 25
2-lb. pkg.	60	50
5-lb. pkg.	1 15	1 00
8-lb. pkg.	1 70	1 50
20-lb. pkg.	3 75	3 25



Rust's Lice Powder

This powder is used for dusting the fowls, and as it contains no naphthalene or other odorous ingredients, it does not affect the flavor of eggs or injure them for hatching, when fowls and nests are dusted with it. When Rust's Lice Powder has been used, fowls are healthiest, have a better appearance, their skin is healthier and their plumage is brighter. Lice, if numerous, make fowls unthrifty and difficult to fatten. They often cause setting hens to leave their nests and prevent hens from laying well. Unless lice are kept down, poultry keeping cannot be made pleasant or as profitable as it should be. Rust's Lice Powder kills vermin on fowls, animals, or plants, and is very economical to use. Directions on each box.

PRICES

	Postpaid	By express
5-oz. box	\$0 15	\$0 10
15-oz. box	30	25
48-oz. box	60	50

Rust's Egg Record

For keeping a record of eggs (good for any twelve months). Mailed free on request.



Oculum

Scientific Remedy and Preventive for Cholera, Roup, White Diarrhea, and Sore Head; also Cure for Gapes

Any man who does not cure sick chickens, turkeys, and ducks with **Oculum** bought of us gets his money back on request.

Give your hens **Oculum** and they will get heavier, their combs will get **red and stay red**; they will lay much better and more regularly, and in the fall and winter, you will get eggs while the other fellow is vainly looking for the eggs that do not come.

Give your chicks **Oculum**—they will eat greedily, grow rapidly, and develop quickly into broilers and pullets.

Postpaid

Bottle \$0 25
Large Bottle 50

French's Poultry Mustard

The Original Poultry Mustard in America. Absolutely pure and prepared to produce more excellent results. Used and recommended by thousands of breeders, fanciers, and practical poultrymen.

For many years poultry fanciers have striven for increased egg-production alone, with consequent showing by actual tests of a loss in degree of stamina and fertility. The use of mustard has shown an **actual increase in both stamina and fertility**.

It stimulates. It invigorates. It rebuilds lost and wasted tissues. It shortens the moulting period and starts the hens laying. A fair trial will convince you of its worth.

A teaspoonful for every six hens, mixed with the wet or dry mash, should be fed each morning.

Each	Postpaid	10-lb. Box	Each	Postpaid
1 1/2-lb. Box	\$0 45	\$0 55	25-lb. Box	5 50
3-lb. Box	75	85	50-lb. Keg	10 50
5-lb. Box	1 25	1 40	100-lb. Keg	20 00

Roto Pigeon Salt A Necessity to the Health of Pigeons

Roto Pigeon Salt is compressed into bricks that are not affected by any climatic conditions. There are two holes through the brick, which allows it to be nailed or screwed to the side of the building, just above a perch, where the birds can have easy access to it without being able to foul it, and it is up out of the way. Size of Bricks, $7\frac{1}{2}$ x $3\frac{1}{2}$ x 2 inches.

1 Brick	Postpaid
12 Bricks	2 25

\$0 25
2 75

Roto Rabbit Salt Spools

No feeder or holding device necessary as Spools are fastened to wall by means of nail or screw through hole in center.

Size: 2 inches diameter, $1\frac{1}{8}$ inches thick.

1 Spool	Postpaid
12 Spools	1 00

\$0 10
1 15

KILL POULTRY LICE WITH **Bee Brand** INSECT POWDER



A safe, harmless and effective destroyer. Dust it in feathers, under wings, and in nests. Its occasional use keeps poultry free from lice and assists in heavy egg-production. Non-poisonous and absolutely harmless to poultry, animals, and mankind. **Bee Brand Insect Powder** also kills flies, fleas, mosquitos, ants, roaches, bed-bugs, cooties, moths, and many other insects. Free booklet on request. In sifting-top tin canisters, 10 cts., 25 cts., 50 cts., \$1; postpaid, 15 cts., 30 cts., 55 cts., \$1.10

Manufactured by **McCORMICK & CO.**
BALTIMORE, MD., U. S. A.

We highly recommend Bee Brand Insect Powder for killing poultry lice and many other insects.

Don Sung

A NEW DISCOVERY

Don Sung (Chinese for egg-laying) is a new scientific discovery that acts as a general tonic and conditioner for the hen and makes her healthy, strong, and vigorous. As a result she lays regularly in any season.

Don Sung is easily given in the feed and costs nothing to try. It doesn't force or hurt the hen in any way; in fact, it makes her healthier. It is used by thousands of successful poultry raisers the world over.

Price, 50 cts.; large size (holds three times the 50-ct. size), \$1; Special Size (holds six times the \$1 size), \$5. All postpaid.



Guarantee
"More Eggs or No Pay"

Are Your Chickens' Noses Running?

Then watch out for

Bu-Du For Roup

A cold is usually the start of Roup. After that the disease progresses rapidly. In a short time it can kill every chicken you own.

Roup is one of the most serious of poultry diseases. The air-passages clog up and the bird soon chokes to death. It is very contagious.

At the first symptom of a cold in your flock you should start giving

Bu-Du

to every affected bird. This famous remedy is positively guaranteed to give complete, prompt and positive results, or your money will be refunded in full. There is nothing on the market like Bu-Du. Price, 50 cents, postpaid.

Avicol

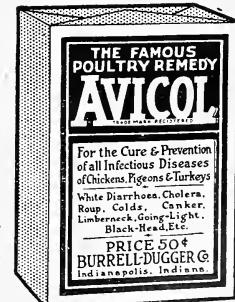
STOPS CHICKS DYING

Most people lose half of every hatch and seem to expect it. Chicken cholera or white diarrhea is the trouble.

Avicol is easily given in the water for either the prevention or treatment. The thousands of poultry-raisers who have used Avicol are unanimous in their praise of it.

Get a package of Avicol today. If you don't find that it promptly stops your chicks dying, or is not successful in the treatment of white diarrhea and all other bowel diseases of poultry, your money will be refunded.

Price, postpaid, 25 cts.; 50-ct. size (holds two and one-half times 25-ct. size); large size (holds two and one-half times 50-ct. size), \$1.



TALCIMIZED SODIUM FLUORIDE

Sodium Fluoride

Sodium Fluoride is recommended by the U. S. Department of Agriculture to kill all lice quickly and effectively. Safe, easy to use, and inexpensive.

Talcimized Sodium Fluoride is made especially for poultry, and carries the Government's directions for applying. Kills both young and old lice.

Price, postpaid, 35 cts. and 60 cts. (holds two times 35-ct. size)



Nu-Life Pills

For Poultry, Turkeys, and Pigeons

A remedy for Going Light, Bowel Trouble, Roup, or any run-down condition of Poultry, Turkeys, or Pigeons. Unexcelled for conditioning exhibition Poultry or Pigeons and a boon to breeders of pit games.

Nu-Life Tonic (Powder Form)

To be placed in the drinking-water or mash-feed. It is intended for the poultry fancier who has insufficient time to give Nu-Life Pills. Nu-Life Tonic is also valuable in treating Chicks for White Diarrhea or Stunted Growth and will quickly restore adult fowls to the best of condition. Nu-Life Pills and Nu-Life Tonic are packed in two sizes, 30 cts. and \$1; postpaid, 35 cts., and \$1.05. Guaranteed to please or money refunded.

Nu-Life Co.

Gentlemen: Enclosed find cash for one box of Nu-Life Pills. I have used two boxes and would not be without them. I have also used one box of Tonic with fine results.

Yours respectfully,

F. E. GREEN,
Pittsburgh, Va.

Gentlemen: I think your Remedies are the best on the market for bowel trouble. Find check enclosed for twelve more boxes.

J. HIPPERT,
Pittsburgh, Pa.

233 Harrison St.

Gentlemen: I have used Nu-Life Pills for years and find them the best of their kind and I have tried them all.

Yours truly, LEO A. HARTMAN,
113 Camp Ave. Braddock, Pa.

A CHEMICALLY PREPARED LIQUID INSECTICIDE

A remarkable chemi-
cal preparation, harmless
to mammals, which in-
stantly destroys all forms
of insect life.

Flyosan actually kills
Flies, Mosquitos, Cock-
roaches, Water-bugs, Ants, Moths, Bed-bugs, Fleas, Chicken-
Lice, Hog-Lice, Cattle-Lice, Dog-Lice, etc., by the simple ex-
pedient of applying with an ordinary spray, wherever and when-
ever required. The results you obtain from a single application
will convince you that **Flyosan** is the most positive and efficient
product of its kind.

Flyosan disinfects and deodorizes. It is non-poisonous and
non-explosive. It hasn't a single drawback. Even the odor is
pleasant—to everything except bugs. The U. S. Navy was kept
bugless because of **Flyosan**. The trenches abroad—well, you
know what they were, and they had no **Flyosan** there.

DO YOU OWN CHICKENS?

Keep off lice with **Flyosan** and prevent cholera by spraying
the hen-house every week.

PRICES

		Postpaid
Pint.	\$0 75	\$0 85
Quart.	1 25	1 40
Half-Gallon.	2 25	2 50
Gallon.	4 00	



Day-Old Chicks

We make a specialty of furnishing our customers with Day-Old Chicks of all leading breeds, from high-bred stock. Beginning early in March, we will receive from nearby hatcheries from one to three shipments per week. To secure the breeds desired and the choicest stock we suggest that orders be placed at least a week or ten days before the chicks are wanted. Prices quoted on request.



Good News for Poultry Raisers

Stops Roup, Canker, Scaly Legs, Bumblefoot, Chicken-Pox, Blackhead in Turkeys, and Other Contagious Poultry Diseases.

It is well known that all the common diseases of poultry are germ diseases. These cause the big losses because of the ease with which they are spread. This can be stopped and the germs destroyed by use of B-K. Using B-K means dollars saved, less work, and increased profits.

B-K is clean, colorless, destroys all the heavy, sickening odors in brooders and pens, leaves no odor, makes everything smell fresh and inviting, and is easily used. Diluted in the proper quantity of water, it can be sprinkled or sprayed about your chicken-house and yards.

B-K tested by the U. S. Government Method has a phenol coefficient of 10 plus which means that B-K has over ten times greater germ-killing strength than undiluted carbolic acid. But B-K contains no poison or acid.

B-K may be used where poisons cannot.

B-K disinfecting is thorough and effective, destroying the nits and eggs of lice.

With B-K you can protect the entire flock from disease for only a few cents per week.

Disinfecting with B-K is more effective than with other disinfectants because B-K is a cleanser and deodorant as well as a powerful germicide. It also removes stains, brightens the plumage, and cleans the skins of the birds.

B-K may safely be used everywhere. When fed in the drinking-water, it helps kill disease germs in mouths and gullets and prevents infection.

It uses about your poultry-yards means effective protection and consequently greater profit from your efforts. B-K is dependable. You cannot afford to be without it. Put it to use at once.

B-K BANISHED TICKS AND FLEAS

Have given B-K a trial and found out just what it can do with ticks on chicks, also fleas. Nothing better for the poultry yard and houses.—N. HENRY ARNOLD, Savannah, Ga.

CHICKENS WERE DYING, NOW WELL

Our hens and chickens were sick and dying with roup and cholera. We used B-K in the drinking-water and sprayed the hen-house and coops with it several times. The chickens are well now, and we have not lost any for some time. Are well satisfied with it.—HENRY A. TAYLOR, Elkhorn, Wis.

PRICES

1-qt. bottle	\$1 25	5-gal. bottle	\$12 50
1-gal. bottle	3 00	Write for special circular	

Disinfectant

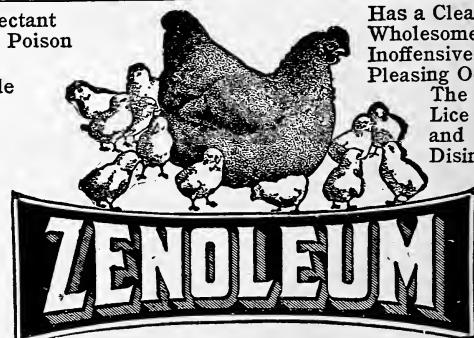
Won't Poison

Won't Explode

Won't Burn

Has a Clean,
Wholesome,
Inoffensive, and
Pleasing Odor

The Surest
Lice Killer
and
Disinfectant



A single quart is all that is necessary to rid 100 hens of lice, mites, and germ filth; it cures and prevents all ordinary poultry ailments and diseases—contains nothing that is injurious—insures cleanliness—and safeguards your poultry's health and your own profits.

	Postpaid
8-oz. can, making 6 gals. of fluid	\$0 35 \$0 40
Qt. can, making 25 gals. of fluid	75 85
1/2-gal. can, making 50 gals. of fluid	1 25 1 40
1-gal. can, making 100 gals. of fluid	2 00
5-gal. can, making 500 gals. of fluid	8 00
ZENO-LEUM LICE POWDER, 1 lb.	30 35

Rutland Egg Preserver



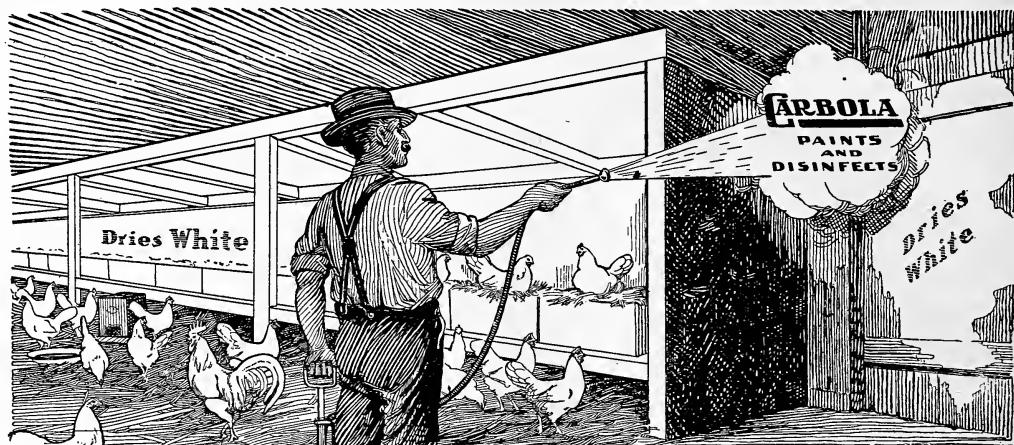
Prepared from a high grade of water glass manufactured especially for the purpose.

There are many so-called egg-preservers on the market; some are inferior water glass; some are not water glass at all. Water glass, not especially prepared for preserving eggs, may contain too much alkali; water glass can sometimes be bought in bulk by the quart, but this is not a safe way to purchase it as one knows nothing about the strength of the solution. This is a most important point in the preserving of eggs. The cost of eggs is such that it does not pay to take chances.

The prudent housewife uses only an egg preserver prepared especially from a high grade of water glass—**Rutland Egg Preserver.**

A one pint can will be sufficient for preserving about eight dozen eggs; the contents of a one-quart can will preserve from fifteen to twenty dozen.

	Postpaid
Pint Can.....	\$0 25
Quart Can.....	40
Gallon Can.....	1 00
	\$0 35
	55
	1 30



Certain Results—Easy to Use

There is no doubt about the sanitation you get and the better profits you obtain from your flock when you use Carbola. There is no doubt, either, about the extra and unnecessary work the use of Carbola saves you. It is a short-cut to the best results—a time- and money-saving method of whitewashing and disinfecting.

Successful poultrymen know that, next to a proper supply of feed and water, the most important thing in poultry-raising is keeping the houses clean and the birds free from lice and mites. Sickness and disease usually start in unclean quarters and in such quarters lice and mites are always more plentiful. Thousands of poultrymen in all parts of the country do their whitewashing and disinfecting in one operation by using

The Disinfectant that Dries White

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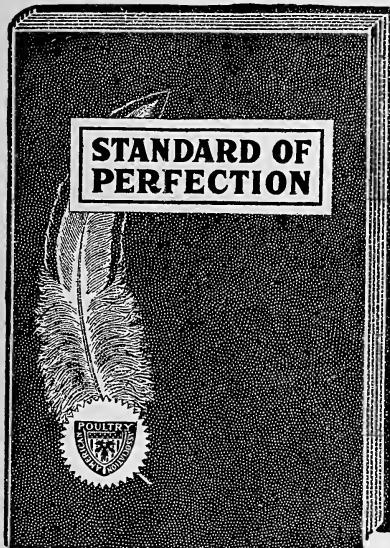
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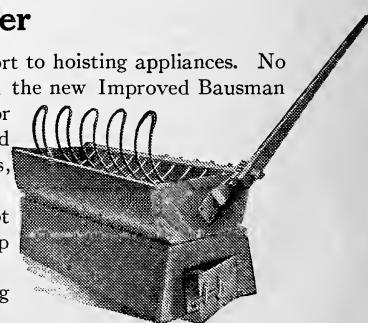
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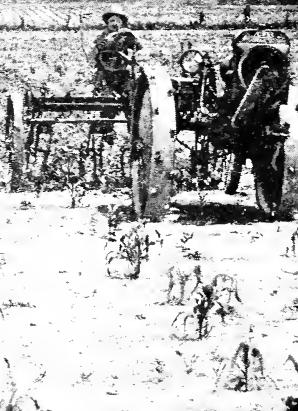
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